

Antiquity

A Quarterly Review of Archaeology

VOL. X No. 40

DECEMBER 1936

Editorial Notes

THIS is the 40th number of ANTIQUITY, which has now completed the first ten years of its career. It is an event of which we are justly proud, and we propose to celebrate it by describing how ANTIQUITY came into existence. Although there are still quite a large number of the original subscribers of 1927 left, there are also many others of more recent date. All, we think, will like to be told the inner history of a venture which has succeeded so well. It is necessary to do so mainly in the first person, since the idea originated in the brain of the founder (Crawford), though he was closely associated with his colleague (Austin) from the very outset, and it was Austin who suggested the title ANTIQUITY.



On 19 December 1925, I set down the main facts in the following words:— 'If the scheme to found an archaeological quarterly should succeed, it will some day be of interest to know its inception. The idea was my own, and was suggested by the excellence of the old ARCHAEOLOGICAL REVIEW published during the 80's and edited by G. L. Gomme. This contained, amongst other good things, Sir Arthur Evans's article on Stonehenge (1885), and it was to consult this that I referred to the Review. The idea, vaguely formed about the middle of November 1925, took more definite shape in discussing it (for the first time) with Dr Clay, with whom I was staying at Fovant

ANTIQUITY

19 to 25 November'. Further discussions with other friends took place during the weeks following. It is curious that at this early stage, though the need and functions of such a journal were quite apparent to me, I did not then see myself as the Editor, and even wrote that 'the question of an editor is the crucial one and as yet undecided'.



At Christmas I discussed the project with a non-archaeological friend who confirmed me in my opinion that I should not only have to edit but also to publish the journal myself. Neither publishers nor booksellers could offer, in return for a heavy commission, anything that I could not equally well obtain for myself. Moreover, I could concentrate my publicity efforts upon the archaeological public, which a publisher, with all his varied interests, could not be expected to do. On the other hand, if I were to take on this heavy responsibility, I must have a collaborator, who would have to be resident in the town where the journal was printed. By good fortune Gloucester contained both the man and the firm, both now well-known to readers of *ANTIQUITY*. On 8 February 1926 I discussed the project with Roland Austin and William Bellows at Gloucester. We each proposed titles, but without coming to any definite decision. Shortly after this, however, in a letter to me dated 14 February 1926, Austin suggested *ANTIQUITY*. This title fairly covered all the subjects I had jotted down in a list of projected articles; it was not exclusive and would cover those of historical and anthropological interest. The scope of the journal was to be the whole field of human history from palaeolithic times down to the modern period. Among the rejected titles were 'Origins' and 'The Archaeological Review'.



What I had in mind was to found a journal which would raise the general status of archaeology, and would popularize its achievements without vulgarizing them—in a word, which would take a place equivalent (both in form and content) to that already occupied by the monthlies and quarterlies in regard to public affairs generally. The main outlines of the evolution of human culture are now firmly established, and it was time that this knowledge should become diffused. But it seemed nobody's business to diffuse it. Here was a demand without a supply. I decided to meet it.

EDITORIAL NOTES

Of the purely business aspect it is obviously impossible to give full details. The preliminary publicity required the expenditure of a comparatively small sum which was forthcoming. (This debt was repaid within a short time of publication, when future prospects were bright, and I take this opportunity of publicly expressing my gratitude to the generous—and by his wish anonymous—friend responsible). On 29 September 1926 another meeting took place at Gloucester, when definite decisions were reached, and 15 March 1927 was fixed as the date when the first number would appear.



Early in January 1927, twenty thousand prospectuses were posted, and on returning from abroad on the morning of Sunday, 16 January, six hundred postcards awaited me, each representing a subscriber! To carry out the project on the minimum scale then envisaged, it was estimated that at least 600 subscribers were necessary. Thus at one bound the objective had been reached. But it was clear that many more subscribers would be obtained during the next few weeks, both from abroad and from those who had not decided at once to subscribe. By the time the first number went out the 600 subscribers had more than doubled, for new ones were coming in daily. These figures, then so unexpectedly high, have long been surpassed, and now look small. Actually, on perceiving that the venture was going to succeed beyond my most sanguine expectations, its scope was at once enlarged accordingly, for plainly it would be possible to carry out a more ambitious scheme. What I had in mind at first was rather a *review* of current activities than a journal which would publish first-hand accounts of those activities. *ANTIQUITY* was to be critical rather than descriptive. But now it seemed possible to combine both functions. In fact, though the element of criticism has constantly been represented, chiefly in the form of review-articles, purely descriptive matter tends to predominate.



There was never much doubt about being able to get and keep my readers, once I was given a chance of showing them, by the publication of a few numbers, what could be done; but one of the chief difficulties I foresaw, and one which has never been entirely overcome, was to obtain the right sort of article. This difficulty was naturally greatest before Number 1 had appeared. The first number was not

ANTIQUITY

all that we could have wished, though it contained some good things. In actual fact we had to print every article then in hand, and when this was done nothing was left but promises to rely upon for Number 2. Since then, it has often happened that there have been only one or two articles in reserve after the publication of any given number. This causes occasional anxiety, but helps to keep the contents fresh and up to date, and never yet has the post failed to bring the necessary manuscripts.



Thus ANTIQUITY has the merit, if such it be, of not having overreached itself in the first number, like so many new journals which appear with a blaze of talent and die down rapidly to a feeble flicker of second-rate stuff. It would be very easy, but most invidious, to name the authors of those which the Editors consider the ideal articles! Nearly all have been asked for (most articles in ANTIQUITY have originated in a special request). The writing of some has initiated research that otherwise would never have been undertaken. Sometimes that research has ended in the production of an article admirable in every way, but too learned or too long for ANTIQUITY. Some proposed articles have eventually appeared as books! One of my first steps was to write out a list of suitable articles. It is in front of me now, and is headed 'Subjects for the Archaeological Review' and is dated 18 December 1925. There are 107 titles; of these 32 have been completely published at the end of our first decade. Several of the remainder have been printed elsewhere in a modified form or in another journal. The first title is 'Descriptive list of the earliest Iron Objects found'. The article which substantially deals with this subject was published under another title in the present volume. Patience and importunity are among the many qualities necessary in editing, and we still hope to obtain some of the seventy articles which we should like to print.



At first ANTIQUITY was published on the fifteenth of the month of issue, but we found that people thought it was always exactly a fortnight late, so we changed the date to the first of the month. Actually ANTIQUITY has always, without a single exception, appeared punctually on the appointed day, which must constitute a record. It is one for which all the credit must be given to my co-editor; what it has cost to

EDITORIAL NOTES

achieve this, he and he alone knows, though echoes of the struggle sometimes reach Nursling. There are times when I wonder whether it would really matter, in comparison with the efforts involved, if we were a day or two late ; but I have held my peace, and the seemingly impossible has always happened. Long may it continue to do so.



Difficult as it has often been to obtain the right kind of article, we have somehow kept up the standard, and we shall endeavour to do so if in the years to come we are as well supported by archaeologists as we have been in the past. Here we will take the opportunity of asking them to send in more NOTES. These are popular with readers, but very hard to get. They should be about two or three pages (1500-2000 words) in length.



Our illustrations are, we know, famous both for their number and quality. Some are supplied by the authors of articles, though not always in a form suitable for reproduction. However, so long as we get *good* illustrations, we are content, if it must be, to go through the processes necessary to achieve that end. It is no exaggeration to say that, in a scientific journal, plans and illustrations are often more important than the text.



Finally, a word about circulation, the life-blood of every journal. Only by constant and unremitting work can the circulation of ANTIQUITY be maintained. The inevitable wastage that every journal has to face is a serious and ever-present anxiety. We have to get new subscribers by our own efforts, though we owe much to those of our friends, who have been extraordinarily helpful in this way (we have one such particularly in mind). We beg of them to continue so. We have achieved our ambition of ten volumes, but we do not intend to rest upon our laurels. Until the day comes, as inevitably it must, to hand over the control to another generation, we shall do our best to produce ANTIQUITY on the same level of achievement as in the past decade. We welcome criticism, but we also ask for the help that can so easily be given—help in the form of additional subscribers ; of prompt fulfilment of promises of articles and reviews ; the early return

ANTIQUITY

of proofs, and payment of subscriptions. The onerous duty of editing can be greatly lessened by such small things as these. Neither of us can give his whole time to the work ; if we could, we should perhaps be able to improve its quality. But we must not end with a petition, but rather with an expression of sincere and heartfelt thanks to all our readers and contributors—including the faithful band of Reviewers who have given ANTIQUITY a very high standing in this respect—without whose willing cooperation it would never have been possible to reach the FORTIETH NUMBER.



In deference to the feelings of our subscribers we refrain on this special occasion from adding the usual annual exhortation, and content ourselves with the insertion of the form which gives the information so necessary for our existence.

Human Progress; a review

by O. G. S. CRAWFORD

MAN MAKES HIMSELF. By V. Gordon Childe. London: Watts & Co., 1936. pp. 274. 7s.

NO book quite like this has ever been written. That is partly because the scientific discoveries upon which it is based are themselves so new that some of them are still unpublished (the earliest pictograms, for instance). But even when the knowledge is less new it is, for the most part, the special preserve of a few students, of great powers but limited range and outlook. Professor Childe can meet them on their own ground, for he has studied the archaeology of the Near East and India (as well as of Europe) at first hand. Four of the nine chapters in this book 'are based on first-hand study of the original objects, and reports' (p. vii); and, indeed, so are the relevant parts of the first three—the last two being of a general nature. There is probably no man living with better qualifications for such a theme as the Making of Man; and that holds true, whether one agrees (as the reviewer does) with Professor Childe's thesis, or not. Most of it, of course, is not opinion but fact.

That thesis is as follows. (The author's ideas are stated in his own words, whenever practicable).

Both men and animals have to satisfy their primary needs by adapting themselves to their environment; otherwise they perish. Man differs from the animals because he solves his problems by the use of intelligence instead of by some long-drawn-out process of organic change. For example he meets the primary need of shelter by clothing himself in animals' fur, instead of growing it on his body (I employ a Lamarckian mode of expression for convenience only). Such intelligent devices are 'external to his body; he can lay them aside and don them at will. Their use is not inherited, but learned, rather slowly, from the social group to which each individual belongs' (p. 19). Slow though the process is, it is infinitely quicker than the animal method; and it has the paramount advantage of allowing the organism, man, to

ANTIQUITY

retain complete power of adaptability to altered circumstances. Thus human history is seen as the interaction between man and his environment, which includes of course other groups of men. More precisely the 'realist conception of history' insists on 'the prime importance of economic conditions, of the social forces of production, and of applications of science as factors in historical change' (p. 7).

The actual process of historical change, as operated by those causes, can be seen with beautiful clarity at certain crucial moments of the past. These moments, of many generations in duration, Professor Childe calls, quite correctly, 'revolutions'. 'Each new "age" is ushered in by an economic revolution of the same kind and having the same effect as the "Industrial Revolution" of the eighteenth century' (p. 39). 'The First Revolution that transformed human economy gave man control over his own food supply' (p. 75). That revolution Professor Childe calls the Neolithic Revolution; it was the climax of a long process and consisted of the invention of agriculture and the domestication of animals. This economy of food-production (as contrasted with the preceding one of hunting and food-gathering) 'provides an opportunity and a motive for the accumulation of a surplus' (p. 93). It is also 'entirely self-sufficing', though without necessarily involving isolation (p. 94). Indeed complete economic self-sufficiency may never have been attained. 'The point is that such trade [as existed] was not an integral part of the community's economic life; the articles it brought were in some sense luxuries, non-essentials'. Even the trade in flint and other stones partook of this nature; for local sources of supply were invariably drawn upon as well. This sporadic intercourse 'was of vital importance to human progress; it provided channels whereby foreign materials might be compared, whereby, in fact, culture itself might be diffused' (p. 98).

The First Revolution is associated with the invention of certain crafts, such as pot-making, weaving and spinning, which in their turn 'reacted on human thought. Building up a pot was a supreme instance of creation by man' (p. 105). A loom, too, is 'quite an elaborate piece of machinery', and its invention 'was one of the great triumphs of human ingenuity . . . an application of science that only to the unthinking seems too trivial to deserve the name' (p. 107). Yet all these industries 'were household crafts. In our hypothetical neolithic stage there would be no specialization of labour—at most a division of work between the sexes' (p. 107). Moreover all these industries, 'from garden culture to weaving, have been rendered possible only by the

HUMAN PROGRESS

accumulation of experience and the application of deductions therefrom. Each and all repose on practical science'. But 'if we may judge from the procedure of modern barbarians, the legitimate deductions from experience are inextricably mixed up with what we should call useless magic. Each operation of every craft must be accompanied by the proper spells and the prescribed ritual acts' (pp. 107-8). Also, an associated event may wrongly be regarded as a cause. 'Because the star Sirius is seen on the horizon at dawn when the Nile flood arrives it is inferred that Sirius causes the Nile flood. Astrology is based on this sort of confusion' (p. 117). At a later date this primitive credulity was fully exploited by the priests in the name of their god; to what extent such exploitation already existed before the Second Revolution we do not know, but we are inclined to think there may have been more of it than Professor Childe suspects. On the other hand it is not likely to have developed very far, for 'had such magics and rituals been firmly established, they would surely have retarded the spread of the Second Revolution. After it, firmly rooted beliefs—for instance, in the efficacy of astrology and the potency of divine kings and ancestral spirits—did impede the growth of true science and the establishment of an inter-urban international economy' (p. 113)—just as, we might add, they still do today.

This early science is essentially a social thing. 'The craft traditions are not individual but collective traditions. The experience and wisdom of all the community's members are constantly being pooled' (p. 108), just as are the results of men of science today; indeed that is the essential feature which distinguishes the scientific worker from the capitalist business man, the doctor from the inventor of patent medicines. 'The neolithic economy as a whole cannot exist without co-operative effort' (p. 109).

The Second Revolution 'transformed some tiny villages of self-sufficing farmers into populous cities, nourished by secondary industries and foreign trade, and regularly organized as States . . . The scene of the drama lies in the belt of semi-arid countries between the Nile and the Ganges. Here epoch-making inventions seem to have followed one another with breathless speed, when we recall the slow pace of progress in the millennia before the First Revolution or even in the four millennia between the second and the Industrial Revolution of modern times', [which is of course the Third Revolution].

'Between 6000 and 3000 B.C. man has learnt to harness the force of oxen and of winds, he invents the plough, the wheeled cart and the

ANTIQUITY

sailing-boat, he discovers the chemical processes involved in smelting copper-ores and the physical properties of metals, and he begins to work out an accurate solar calendar. He has thereby equipped himself for urban life, and prepares the way for a civilization which shall require writing, processes of reckoning and standards of measurement—instruments of a new way of transmitting knowledge and of exact sciences. In no period of history till the days of Galileo was progress in knowledge so rapid or far-reaching discoveries so frequent' (pp. 118-9).

The First Revolution had bound men to the soil. From its inception 'capital in the form of human labour was being sunk in the land . . . They would not lightly forego the interest brought in by their reproductive works' which 'required capital in the form of a stock of surplus food-stuffs, accumulated by and at the disposal of the community' (p. 122). The Second Revolution arose quite naturally out of the first, for it 'required that a substantial proportion of the community should be permanently withdrawn from the primary business of getting food to be employed on reproductive works, in secondary industries, in transportation, commerce and administration. That is possible only if there is a surplus of food-stuffs already available to support those members of the community who are no longer themselves producing their own food. Moreover in practice a surplus is needed to barter for raw materials not available locally' (p. 148).

Thus there is observed a growing tendency for the increasing population to remain at home, where labour is needed and is profitable, rather than to migrate and found new self-sufficing settlements; for that would mean abandoning the results of invested labour. Those who thus remain at home become specialists; they devote the whole of their time to the new crafts. As these multiply, urban culture gradually comes into existence, replacing the old self-sufficing neolithic village community.

Professor Childe then discusses the problem of whether 'conquest is an essential pre-requisite to the accumulation of communal capital needed for the accomplishment of the Second Revolution' (p. 148). He concludes that, while 'in Egypt the first accumulation and concentration was apparently the result of conquest . . . it is not demonstrable that such conquest was in all cases the effective cause' of it. 'In Mesopotamia . . . it was nominally a native god (in practice, of course, the corporation of his self-appointed priests) that administered the accumulated wealth of a Sumerian city; there are only the vaguest and most ambiguous hints of an aristocracy owing its wealth to conquest

HUMAN PROGRESS

rather than to religious prestige and homegrown social tradition' (p. 149). 'The magician may have been the first independent craftsman, the first member of any community to have a claim on the surplus product of the collective food-quest without contributing thereto by physical activity. But the magician's wand is an embryo sceptre, and historical kings still retain many trappings from their magic office . . . Anyone who could successfully claim to control the elements by his magic would, of course, earn immense prestige and authority. It is needless to demonstrate in detail how many opportunities of aggrandisement through alleged magical prowess must have presented themselves in ancient societies' (p. 153). He points out, further, that 'in the oldest Indian cities we simply do not know how the communal surplus was accumulated or controlled. Military conquest is one means of assuring the accumulation of a surplus of wealth. But theories that regard it as an essential precondition of the Second Revolution must be regarded with reserve' (pp. 149, 150). There speaks the archaeologist-historian, who alone can discover what *did* or did *not* happen, as contrasted with the old-fashioned sociological theorist, who at the best can never go beyond what *might* have happened.

Here we must digress for a moment to consider Professor Childe's ideas of 'history' and 'progress'. At the beginning of the book he points out what a poor, maimed thing the old-fashioned 'history' was, confined as it was to isolated, disconnected chunks of national history, each apparently unrelated to the other; that the true current of human history is like a mighty river whose onward flow can only be observed when long stretches are examined (we are describing this process in our own words). Further, he shows that human history 'is seen growing out of the "natural sciences" of biology, palaeontology and geology', so that the same objective tests of 'progress' should be applicable as those which are in fact applied there to other species of animals. 'Now to a biologist progress, if he used the term, would mean success in the struggle for existence'. Survival of the fittest is a good evolutionary principle. A provisional test of the 'fitness' of a species 'would be to count its members over several generations. If the total numbers turn out to be increasing, the species may be regarded as successful; if the total is dwindling, it is condemned as a failure' (p. 11). Figures of this kind 'provide an objective criterion by which such an event as the Industrial Revolution may be judged . . . The chief aim of this book is to examine prehistory and ancient history from this angle. It is hoped that a consideration of revolutions so remote

ANTIQUITY

that it is impossible to get angry or enthusiastic about them, may help to vindicate the idea of progress against sentimentalists and mystics' (p. 16).

Tested thus, each of the economic revolutions described in this book is seen to be a success, for each was accompanied by a marked increase in the population of the communities concerned. The old nomadic hunting-communities were small in numbers; contrast with them the new growth of neolithic villages which grew up over the area between the Nile and the Indus. Then compare the size of those neolithic villages with that of the urban cities which succeeded them, often on the same spot. These are objective facts. They are historically associated with certain inventions. Who but an obscurantist would deny those changes the name of 'progress'?

Chapter 7 gives an admirable picture of the new conditions of life in an urban community. Now for the first time in history we meet with real towns. In most essentials those conditions continued with little change right down to the Industrial Revolution, a period of some five thousand years. Economic self-sufficiency had been sacrificed and a completely new economic structure was created. 'The surplus of home-grown products must not only suffice to exchange for exotic materials; it must also support a body of merchants and transport-workers engaged in obtaining these, and a body of specialized craftsmen to work the precious imports to the best advantage. And soon soldiers would be needed to protect the convoys and back up the merchants by force, scribes to keep records of transactions growing ever more complex, and State officials to reconcile conflicting interests' (p. 159). Archaeology builds up the picture. 'The most striking objects now unearthed are no longer the tools of agriculture and the chase and other products of domestic industry, but temple furniture, weapons, wheel-made pots, jewelry, and other manufactures turned out on a large scale by skilled artisans. As monuments we have, instead of huts and farmhouses, monumental tombs, temples, palaces and workshops. And in them we find all manner of exotic substances, not as rarities, but regularly imported and used in everyday life' (pp. 159, 160). This reflects a transformation in the economy that produced the material, and is accompanied, as it should be, by a rise in the population, as indicated by the size of the cities. 'Mohenjo-daro in Sindh, for example, spread over a square mile of land' (p. 160); the contemporary cemeteries tell the same tale in Mesopotamia and Egypt.

At Erech (Uruk) there was a succession of stratified neolithic villages,

HUMAN PROGRESS

formed of the ruins of reed huts or mud-brick houses and occupying a vertical space of fifty feet. Then appears 'a truly monumental building—a temple or group of temples', and a ziggurat or artificial hill,¹ whose erection implies 'a large and disciplined force of labourers and craftsmen'. These people, being withdrawn from food-production, must have been supported from some common store of surplus food. 'Whose? Presumably it was already controlled by the power, we may perhaps say already "deity", to whose honour and glory the buildings were dedicated . . .

'But the erection of such a monument required more than labourers and their food. The whole was carefully planned. The artificial mountain was laid out with its corners to the cardinal points. A centralized directing force was requisite. The god being but a fictitious projection of the communal will, that force must have been supplied by his servants. Naturally enough the imaginary god has found earthly representatives and interpreters glad to administer and to enlarge his terrestrial possessions in exchange for a modest share of his income. The wizards and magicians, guessed at in neolithic villages, have emerged as a corporation of priests sanctified with divine authority and emancipated from any mundane labours in field or pasture. These interpret the divine will to the toiling masses or, in other words, twist the magic ceremonies, by which society would compel natural forces, into ever more complicated rites for conciliating the power that now personifies these'. (p. 163).

Out of these complex conditions emerged the invention of writing. It began as a system of mnemonic symbols invented by the priests to record their transactions; it developed through pictograms and ideograms to a regular system of writing. It seems to have been the temple corporations that were responsible for this development, which their own interests demanded, indeed necessitated. 'The Sumerian priests invented writing not in their capacity of ministers of superstition, but in that of administrators of a worldly estate' (p. 209). For the temple was more than a mere centre of superstitious rites; it functioned also, perhaps in fact primarily, as a great capitalist institution, the equivalent of a bank (p. 172). The currency was mainly grain; the earliest archives 'record the god's loans of seed or plough-animals to cultivators, the fields he has let to tenants, wages paid to brewers, boat-builders, spinners and other employees, advances of grain or bullion to travelling

¹ See *ANTIQUITY*, June 1936, pp. 139-41.

ANTIQUITY

merchants. The god is the richest member of the community. His wealth is available to the community from whose piety he, in fact, derived it. But the same piety required that the borrower should not only pay back the loan, but also add a little thank-offering. The god's ministers were doubtless careful to remind you of your duty, and even stipulated in advance what decency demanded you to offer' (p. 173).

From this it was a short step to kingship. 'By 3000 B.C. there is already emerging beside the deity in every city a temporal potentate. He styles himself humbly the god's "vicegerent", but also boldly "king". Perhaps he had once impersonated the god in those sacred dramas imagined above as a factor in the genesis of godhead . . . He has certainly usurped a substantial share of the god's temporal power over men. He even oppresses his subjects, according to quite early documents' (p. 173). But he performed useful functions as a civil ruler, perhaps reconciling conflicting class-interests, and he was also a military commander (p. 174).

Thus there grew up in Sumeria the world's first cities. At first they were independent, and at constant war with each other, the inevitable result of a contradiction between economic realities and political separatism. It was not until about 2000 B.C. that Babylonia became 'a political reality, a unified nation with a common capital, a common code of written law, a common calendar, and a permanent system of government'. That was the work of Hammurabi. 'Then at last the city-state was absorbed into the territorial state that corresponded on the whole to the realities of economic needs' (p. 175).

The Second Revolution in Egypt was approximately contemporary, occurring a little before 3000 B.C. (Menes, the founder of the 1st Dynasty and the unifier of Upper and Lower Egypt is put at 3400 B.C. by Breasted and 3200 B.C. by Meyer). But in Egypt the archaeological evidence is derived mainly from tombs, and we cannot trace the use of an urban economy with anything like so much certainty as in Mesopotamia. The earliest cities are buried under the Nile mud or have been looted and destroyed by later generations of builders. 'The reserve supplies required for the transformation of the economic system were not accumulated in the temples of a communal deity, but in the hands of a monarch who had already placed himself above the society from which he had arisen' (p. 176). Again the magicians appear in full command, and indeed 'in the archaeological record economic

HUMAN PROGRESS

achievements and scientific discoveries appear only as applied to magical ends, as distorted in a ideological medium ' (p. 181).

Of the origins of the Second Revolution in India we know nothing, for ' the simpler villages and townships from which the cities have arisen remain unidentified. By 2500 B.C. the same uniform civilization extends from the mouth of the Indus throughout the lowlands of the Punjab right up to the foothills, but there is no evidence whether any political unity corresponded to this cultural uniformity. It is even uncertain what was the nucleus of capital accumulation. We have indications of a division into classes of rich and poor, but whether a king or a god stood at the head of the hierarchy is uncertain. Both temples and palaces are so inconspicuous among the ruins that their very existence is dubious ' (p. 189).

The revolution was probably contemporary in all three lands. There is archaeological proof of intercourse between them at the time. But ' urban civilization was not simply transplanted from one centre to another, but was in each an organic growth rooted in the local soil ' (p. 190). The process is compared by the author with the rise of mechanized industry and factory production which took place on both sides of the Atlantic at the time of the Third (Industrial) Revolution (p. 190).

When once the new urban economy had been established in the three primary centres, it spread thence to secondary centres in much the same way as Western Capitalism spread to colonies and economic dependencies (p. 191). The process is described in detail on pp. 191-5. Its propagation was in three ways. Economic demand for raw materials promoted the growth of ' industrial specialists ' to supply those needs and thereby share in the surplus. Or ' the Second Revolution was propagated by violence and imposed by the force of imperialism ' (p. 195), just as was the Third, for instance, by the British in India. Or it was propagated by provoking resistance to such attacks ; that resistance could only be successful ' by assimilating part of the civilization of the aggressors ' (p. 198).

In Chapter 8 (the Revolution in Human Knowledge) Professor Childe analyses the causes of the Second Revolution and its results. It ' had produced or accentuated a division of society into classes. In practice kings, priests, nobles, and generals stand opposed to peasants, fishermen, artisans and labourers. In this class-division the scribes belong to the former class ; writing is a " respectable " profession ' (p. 212).

ANTIQUITY

But this at once cut off the scribe from the living world of craftsmen and husbandmen to whose improvements in technique material progress in prehistoric times had been mainly due. It created a privileged class whose members alone had access to the 'learned sciences', which were thus divorced from practical life. To this must have been added the magical virtue attributed to the written word—a magic which would most surely be exploited to the full by those who held the key, just as it was—and indeed still is—exploited by the priests and mullahs of other religions. 'Thus learned men in the East, like schoolmen in our own Middle Ages, were apt to turn to books in preference to Nature . . . Instead of demanding that a book should be up-to-date and embody the latest discoveries, the Egyptian or Babylonian student valued it for its antiquity. A publisher would then advertise his wares not as a "new and revised edition", but as a faithful copy of a fabulously old text' (pp. 213-4). Thus began that 'great intellectual division of mankind' which, as Dr George Sarton truly says, 'is not along geographical or racial lines, but between those who understand and practise the experimental method and those who do not understand and do not practise it'. In other words, there was imposed upon society a Sacred Book of Knowledge containing 'all ye know and all ye need to know'. The artizan and the husbandman, hitherto the harbingers of progress, were superseded by a caste, allied to the ruling class if not actually part of it. Knowledge was fossilized in a bed of verbiage. Observation and experiment no longer directed the advance of humanity.

In passing we may observe that precisely the same phenomenon has occurred at other periods in history. St. Augustine said: 'Whatever knowledge man has acquired outside Holy Writ, if it be harmful it is there condemned; if it be wholesome, it is there contained'. All knowledge is subordinated to the study of 'Holy Writ'. Nature must be studied but only in so far as it is useful for understanding the Scriptures. A knowledge of serpents is useful because it helps us to understand Matthew x, 16, and of hyssop for understanding Psalm L, 9! The mechanical arts require no special study. 'In general it is not unfair to say that [St. Augustine] looks upon Nature simply as a possible aid to the understanding of the Bible'.² Today we have the magic books of Fascism (*Mein Kampf*) and Communism (Marx and Lenin), though it is fair to add that these works do at any rate deal with the

² Benjamin Farrington, *Science in Antiquity*, 1936, p. 242.

HUMAN PROGRESS

practical problems of this world rather than with the imaginary ones of another. Yet salvation lies not in sacred books but in the understanding and practice of the experimental method : though certain obstacles have to be removed before this can be achieved.

The remainder of Chapter 8 is devoted to a very interesting account of early mathematics, impossible to summarize, concluding with notes on early astronomy and medicine (‘ the tradition that medicines must be disgusting is a survival of the demoniacal theory of disease, traceable in the oldest extant medical texts ’ ! p. 250). In a Note on Magic, Religion and Science³ Professor Childe, quite rightly in my opinion, regards the distinction between magic and religion as one of convenience only. Whether the forces in question are impersonal mystic forces or personified as a god is surely immaterial. ‘ It is quite obvious that science did not, and could not, spring directly from either magic or religion. We have shown in detail that it originated in, and was at first identical with, the practical crafts. In so far as a craft like that of healing or astronomy was annexed to religion it was sterilized of scientific value ’ (p. 256). These are weighty words.

THE ACCELERATION AND RETARDATION OF PROGRESS

‘ Before the urban revolution comparatively poor and illiterate communities had made an impressive series of contributions to man’s progress ’, such as ‘ artificial irrigation using canals and ditches ; the plough ; the harnessing of animal motive-power ; the sailing-boat ; wheeled vehicles ; orchard-husbandry ; fermentation ; the production and use of copper ; bricks ; the arch ; glazing ; the seal ; and in the earliest stages of the revolution—a solar calendar, writing, numeral notation, and bronze ’.

‘ The two thousand years after the revolution—say from 2600 to 600 B.C.—produced few contributions of anything like comparable importance to human progress. Perhaps only four achievements deserve to be put in the same category as the fifteen just enumerated. They are : the “ decimal notation ” of Babylonia (about 2000 B.C.) ; an economical method for smelting iron on an industrial scale (1400 B.C.) ; a truly alphabetic script (1300 B.C.) ; aqueducts for supplying water to cities (700 B.C.) ’. But only two of these four discoveries can ‘ be credited to the societies that had initiated and first reaped the fruits of the urban revolution ’ (pp. 257, 8). ‘ We are left then with only two

³ The reference to p. 67 should surely be to p. 62.

ANTIQUITY

first-rate discoveries made by societies equipped with all the advantages of the fifteen mutations that were unified in the urban revolution. Viewed in this light the achievements of Egypt, Babylonia, and their immediate cultural dependencies appear disappointing from the standpoint of human progress. Contrasting progress before and after it, the Second Revolution seems to mark, not the dawn of a new era of accelerated advance, but the culmination and arrest of an earlier period of growth. Yet the Oriental societies had been equipped by the revolution with unprecedented resources and a new faculty of transmitting and accumulating knowledge'. (p. 259).

The explanation of this arrested growth is to be sought in the structure of society as it emerged during the Second Revolution. It had become a class society, dominated by those who controlled the surplus. That involved the degradation of the mass of the population, those productive craftsmen whose fertile brains and clever hands had actually brought about the Second Revolution. Now 'their share in the new wealth was minimal, and socially they were sinking toward the status of tenants or even serfs'. (p. 259). A new army of specialized, non-foodproducing craftsmen and labourers had come into existence, dependent for its livelihood upon the surplus controlled by the ruling class. Though the revolution which their comrades had created was the ultimate cause of the surplus, 'the fraction which came to them was again trifling' (p. 260). The substantial balance 'was retained by the few—the kings, the priests, their relatives, and favourites . . . [The class division] is typified for the archaeologist by the contrast between the overpowering magnificence of royal tombs and the simplicity of private graves in Egypt, or by that between the luxurious houses of merchants and the hovels of artisans in an Indus city' (p. 260). No such contrasts can be observed in earlier times.

Professor Childe is careful to point out that this concentration of power may have been 'essential to ensure the production of the requisite surplus resources and to make these available for effective social use' (p. 259). Further, that 'by the biological standard here adopted the urban revolution is amply justified in its effects, even if those effects include the class division just outlined' (p. 260). Nevertheless the result was a retardation of progress, caused precisely by that class-division; for the ruling classes who now emerged owed their power largely to the exploitation of just those superstitions, in the teeth of which improvements in production-processes had been made. Their affiliations were with priest-craft and superstition, and they could not

HUMAN PROGRESS

be expected to be patrons of rational science. Moreover, the motive was lacking ; labour was cheap and abundant, and could be kept obedient by means of religion, ' the opium of the people '. A potentially dangerous surplus population could be set to work on useless monuments of superstition like the Pyramids.

Subsequent developments followed the normal course towards imperialism. Both Egypt and Babylonia had to obtain their raw materials from outside their own territory. ' Eventually attempts were made to annex the sources of supplies and to conquer the exporting countries '. The empires thus constituted ' undoubtedly contributed to human progress ' (p. 264), but they contained a contradiction. ' The persistence with which the subject peoples revolted is a measure of their gratitude for the benefits ' previously enumerated. Actually it is probable that empires like that of Sargon destroyed more wealth than they created. They were little more than tribute-collecting machines, interfering just so much in the affairs of subject peoples as was necessary to maintain ' law and order ' and to secure the regular payment of taxes.

On almost the last page of the book (p. 268) Professor Childe summarizes in a few admirable words the chief outcome of all this. ' The urban revolution, made possible by science, was exploited by superstition. The principal beneficiaries from the achievements of farmers and artisans were priests and kings. Magic rather than science was thereby enthroned and invested with the authority of temporal power.

' It is as futile to deplore the superstitions of the past as it is to complain of the unsightly scaffolding essential to the erection of a beautiful building. It is childish to ask why man did not progress straight from the squalor of a " pre-class " society to the glories of a classless paradise, nowhere fully realized as yet. Perhaps the conflicts and contradictions, above revealed, themselves constitute the dialectics of progress. In any case, they are the facts of history. If we dislike them, that does not mean that progress is a delusion, but merely that we have understood neither the facts nor progress nor man. Man made the superstitions and the institutions of oppression as much as he made the sciences and the instruments of production. In both alike he was expressing himself, finding himself, making himself '.

So we reach the end of an admirably sane, lucid and unbiassed account of human history. We see the instruments of production shaping the society to which their inventors belong and determining the social relationships within it. We witness the birth of class divisions 5000 years ago, and the retardation which followed. And certain

ANTIQUITY

questions inevitably obtrude themselves. If the instruments of production effected so much then, what social changes should we expect to result from the Third (Industrial) Revolution? The answer is being written today on the map of the world in letters of blood. But it becomes intelligible only to those who have a sure grasp of the main, essential facts of human history as a whole. Then the forces arrayed against each other can be seen in their true historical relationships, and against their economic background, unobscured by nationalist, political or religious façades.

Professor Childe's book can be described as 'Marxist' in the only proper sense of the word; that is to say, it is the sort of book that Marx himself would have written if he were alive today, and therefore had access to all those rich stores of new knowledge that have been created by the archaeologist and historian during the last fifty years. When he wrote this knowledge was not available. It simply was not possible to say through what stages of development human society had passed, actually and as a matter of historical fact. It was merely possible to make certain guesses based upon the analogy of existing 'primitive' tribes. Now the 'argument by analogy' is based upon an assumption—that phases of society observed today represent phases historically enacted by the communities from whom our present culture is derived. That assumption cannot be proved, and is frequently found to be erroneous. In any case it is unscientific and inconclusive. We prefer the story of what *did* happen to speculations about what *might* have happened; we prefer the findings of modern science to the pioneer gropings, however valuable at the time, of writers like Lewis Morgan. Consequently we regard Professor Childe's book as the most stimulating, original and convincing contribution to the history of civilization which we have ever read. That is why we have devoted so much space to it here. We hope that all readers of this summary will buy the book itself.

Mycenae

by A. J. B. WACE

Professor of Classical Archaeology, University of Cambridge

THE plain of Argos is roughly triangular in shape. The base lies along the sea coast from Lerna to Nauplia and the apex is at Mycenae, which thus overlooks the Argive plain as Deceleia overlooks the Attic. The traveller, who, like Pausanias, approaches Argolis from the northeast by way of Corinth and Nemea and sees, as he emerges from the Tretos defile, the Argive plain opening before him to the southeast, will notice among the foothills to his left a rather inconspicuous, but isolated hill standing out between two steep and rocky conical peaks. This is the citadel of Mycenae. It owes its strength to its natural position, which is easily defensible, and it has an ample supply of fresh water from the spring Perseia running into an underground cistern reached by a secret passage. There were also three wells within the walls and at least one rain-water cistern. No enemy can hope to approach its walls in any force without being observed, and its distance from the coast precludes any danger of surprise from the sea. As a seat of power it is admirably placed. It dominates the Argive plain and it controls the routes that lead northeast to Corinth and the rich districts easily accessible thence, the fertile littoral of Achaia or the Boeotian coast with the central Greek plain behind. The site was thus naturally inhabited early in the Bronze Age, probably from the very beginning of that age on the Mainland of Greece about 2800 B.C., and round it on the outlying hills were neighbouring settlements so that the district even then must have been fairly well populated.

In the Middle Bronze Age (about 2000–1600 B.C.) when the first Greek-speaking people seem to have entered Greece, Mycenae was continuously occupied and, though no buildings except a few broken walls survive, pottery of the period is common and many tombs have been found. The most important cemetery of this age lies about half way down the western slope of the citadel where the royal tombs known as the Shaft Graves were afterwards made. The hard limestone rock which forms the summit of the hill stops just at this point on the side of the citadel and the lower slope consists of a soft friable conglomerate. In this graves could easily be dug whereas the hard limestone was quite unsuitable for such a purpose. Here some four

ANTIQUITY

hundred years or more before the great citadel wall was built the people of the Middle Bronze Age buried their dead. Many graves have been found around the royal Shaft Graves and others under the later houses to the south, and the cemetery probably extended further westwards down the slope outside the citadel wall.

At the close of the Middle Bronze Age and at the beginning of the Late Bronze Age Mycenae grew greatly in power, wealth, and importance. Its kings from the later years of the 17th century B.C., till towards the close of the 16th century, were buried with other members of their families in Shaft Graves dug in the midst of the old Middle Bronze Age cemetery. These are the famous royal tombs, the richest archaeological find yet made in Greece, which Schliemann discovered in 1876. These graves are, as their name implies, shafts which vary considerably in depth and in size according to the number of persons laid in them. The Fourth Grave, which contained five bodies, measures 6.55 m. by 4.10 m. and is 2.30 m. deep. The Fifth Grave, which contained three persons, is 5.77 m. by 2.85 m. and is 3.10 m. deep. The Second Grave, which held one body, is only 3.05 m. by 2.15 m. and barely 1.00 m. deep. It is thus not much larger than one of the ordinary private graves of the Middle Bronze Age of the same cemetery and like them its walls were lined with large pieces of schist. The Shaft Graves are in fact enlarged or royal versions of the ordinary type of grave. Another Shaft Grave which had been plundered of most of its contents was discovered outside the Grave Circle, just to the north but within the citadel wall and beneath the floor of a later building thought to be a granary or storehouse. This grave was probably slightly later in date than the royal graves and is smaller than they are, but is larger than the ordinary Middle Bronze Age grave and so may have been made for a noble or high official.

The treasures of the Shaft Graves, both material and archaeological, are too well known to need further description. The faces of the dead were covered with gold masks and their bodies with golden breast-plates. The men had long bronze swords ornamented with hilts of crystal and gold, scabbards decked with engraved gold plates, and daggers inlaid with hunting scenes of vivid artistry in gold and silver. There were engraved signet rings and jewellery of gold, and pins and toilet articles were adorned with the same metal. There were drinking cups of gold including the famous goblet with doves on the rim like Nestor's cup in Homer and a large jug of beaten silver. Three great cups or rhytons were made for rites or ceremonies, a long funnel-shaped

MYCENAE

silver vessel bound with gold and chased with the well known siege scene, a bull's head vessel in silver with golden horns and inlay, and another of gold in the form of a lion's head. There are objects of alabaster, ivory, wood, and faience and a splendid series of large vessels of bronze, cauldrons, ewers, and basins. The grave stelai carved in relief which marked the tombs are also of great archaeological value and display scenes of war and the chase. It is impossible to dwell here on



FIG. 1. MAP OF ARGOLIS (after Schliemann, *Mycenae and Tiryns*)

the importance of all these as works of art. The craftsmanship throughout is of a high standard, and the representations of abstract ornament and of human and animal figures reach the highest level of art; and not even Pheidias or Cellini could have surpassed the magnificent lions on one of the daggers.

At the beginning of the 14th century when the third phase of the Late Bronze Age opened, Mycenae, already wealthy and powerful,

ANTIQUITY

became the centre of the Aegean culture on the downfall of Knossos. The Mainland of Greece had been in touch with the Cretan civilization since the latter part of the Middle Bronze Age and its inhabitants had adapted the Cretan culture to their use, blending it with their own. They had borrowed also the Minoan alphabet, all just as the Etruscans some centuries later borrowed and adapted the Greek alphabet and culture. So during the first two phases of the Late Bronze Age Cretan culture was popular at Mycenae and foreign fashions overshadowed the native. After the downfall of Crete the local style re-emerged, as the extravagance of the Cretan baroque exhausted itself and decayed.

Mycenaean art in its simplicity and dignity foreshadows classical Greek art which, like it, is foreign to the florid exuberance of Crete. The rulers of this latest Mycenae were great builders. To them are due the cyclopean fortifications of the citadel, the palace, the ruins of which crown its summit, and the finest of the beehive tombs.

The citadel of Mycenae is roughly triangular and at its northwest angle is the Lion Gate, the main entrance. It is so placed that any enemy approaching is overlooked by a long stretch of wall on his left hand and on his right by a great bastion thrown out just before the gate. The gate itself (just over ten feet high and ten feet wide) is formed of four huge blocks of hard conglomerate and the bastion and wall by it are constructed of ashlar work of the same material. The individual blocks are enormous and weigh from three or four tons upwards. Over the lintel is set the famous relief of the twin lions guarding the sacred pillar, carved in hard limestone by saw, by hollow drill, and by chisel, but by no metal harder than bronze. The gateway within was roofed and on the left there is a small chamber for the gatekeepers. On the right is a large building of two storeys, probably a storehouse or granary. Immediately in front a great ramp, supported by a lofty cyclopean wall, carries the road up towards the palace on the summit. Below the ramp lies the Grave Circle. When, early in the fourteenth century, the great fortifications with the Lion Gate were planned, the natural line of defence would have carried the wall straight through the middle of the area occupied by the six royal graves which were sacred. Consequently, just within the Lion Gate, the citadel wall was made to bow out westwards in a wide curve so as to enclose the royal graves. The slope where the royal graves lay was levelled by building a curved retaining wall on the west and by filling up the hollow within it with earth and rubbish dug away from the higher slope to the east. Then a double circle of upright slabs roofed with horizontal slabs was erected



TOMBSTONE FROM THE FIFTH SHAFT AT MYCENAE (about 1500 B.C.)
(after Schliemann, 'Mycenae and Tiryns')

MYCENAE

round the six graves, a stately entrance to the circle was made, the sculptured tombstones originally placed over the graves were reset at the higher level of the new circle, and the whole became a sacred area the tradition of which seems to have lasted till the time of Pausanias. It was this tradition which inspired Schliemann to concentrate his efforts here and so led to the rediscovery of the great Bronze Age civilization of Greece, the glories of which are recorded by Homer.

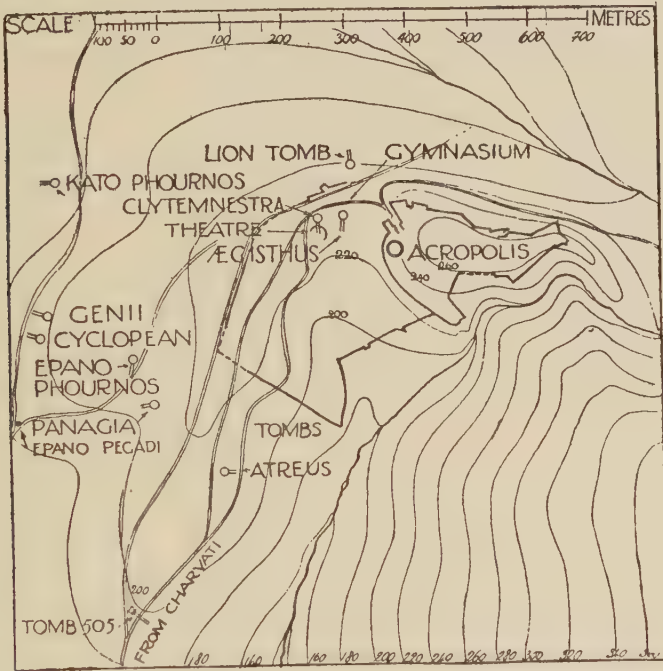


FIG. 2. MYCENAE: sketch-plan showing the relationship of the Bronze Age Acropolis and Hellenistic lower town and positions of the nine Tholos tombs
From Annual of British School at Athens, by permission

South of the Grave Circle there were private houses within the citadel and many others lay within the enceinte. It is incorrect, however, to call Mycenae a city. It was really a citadel containing the palace of the king with houses and quarters for his court, principal officials, guards, and attendants, together with the necessary servants or slaves. It was a royal fortress similar to the Tower of London or Edinburgh Castle and had no true civilian population.

The road which advances up the ramp ascended the hill in zigzags

ANTIQUITY

towards the palace on the summit. Its entrance lay at its northwest angle where remains of a pillared portico have been found. Thence the entrance way ran southwards along the top of a terrace wall from which two ascending corridors branched eastwards to the upper floors. From the southern corridor a side passage led to the official part of the palace laid out on a wide terrace partly cut out of the hillside, partly built up on the support of the citadel wall, which here ran along the brow of the precipice. The official part comprised a large open court with a great hall or megaron on its east. The megaron consisted of a pillared porch, a vestibule, and the megaron proper, with a central hearth of painted stucco surrounded by four columns. The megaron and the vestibule were paved with gypsum slabs and painted stucco and the walls were covered with frescoes, as were also those of the other principal rooms. From the north side of the megaron porch a staircase led up to private apartments which included a bathroom. On the west side of the court was a small state room, floored with painted stucco with a place for a throne, and approached by a broad staircase of two flights coming up from a lower bend of the zigzag roadway. There were at least two storeys in the palace as the staircases prove. Traces of a shrine have been found and of storerooms, and some large column bases lying on the summit indicate that there once stood some large apartment.

The existing palace succeeded an earlier palace which was swept away when the rock was terraced and levelled early in the fourteenth century. It was laid out on a bold and comprehensive scheme. Some alterations were made before its destruction at the fall of Mycenae, but the principal change seems to have been on the terrace now occupied by the megaron and court. The great staircase which ascends directly to them from the zigzag road is out of alignment with the court and megaron but apparently parallel to the road. It was probably built after the original structure here had been damaged or destroyed by a fire which also affected the court. The most striking feature of the palace is its consistent and obviously architectural plan which is in strong contrast with the patent lack of definite plan in Bronze Age buildings in Crete.

The palace standing on the rocky peak of the hill cuts the main area of the citadel into two portions. That to the west is the larger and there lie the Lion Gate, the Grave Circle, and private houses with the road ascending to the palace. To the east of the palace there are the ruins of more houses on the terraced slope, and one of these, which

MYCENAE

SKETCH RESTORATION
OF GRAVE CIRCLE
JUST AFTER COMPLETION

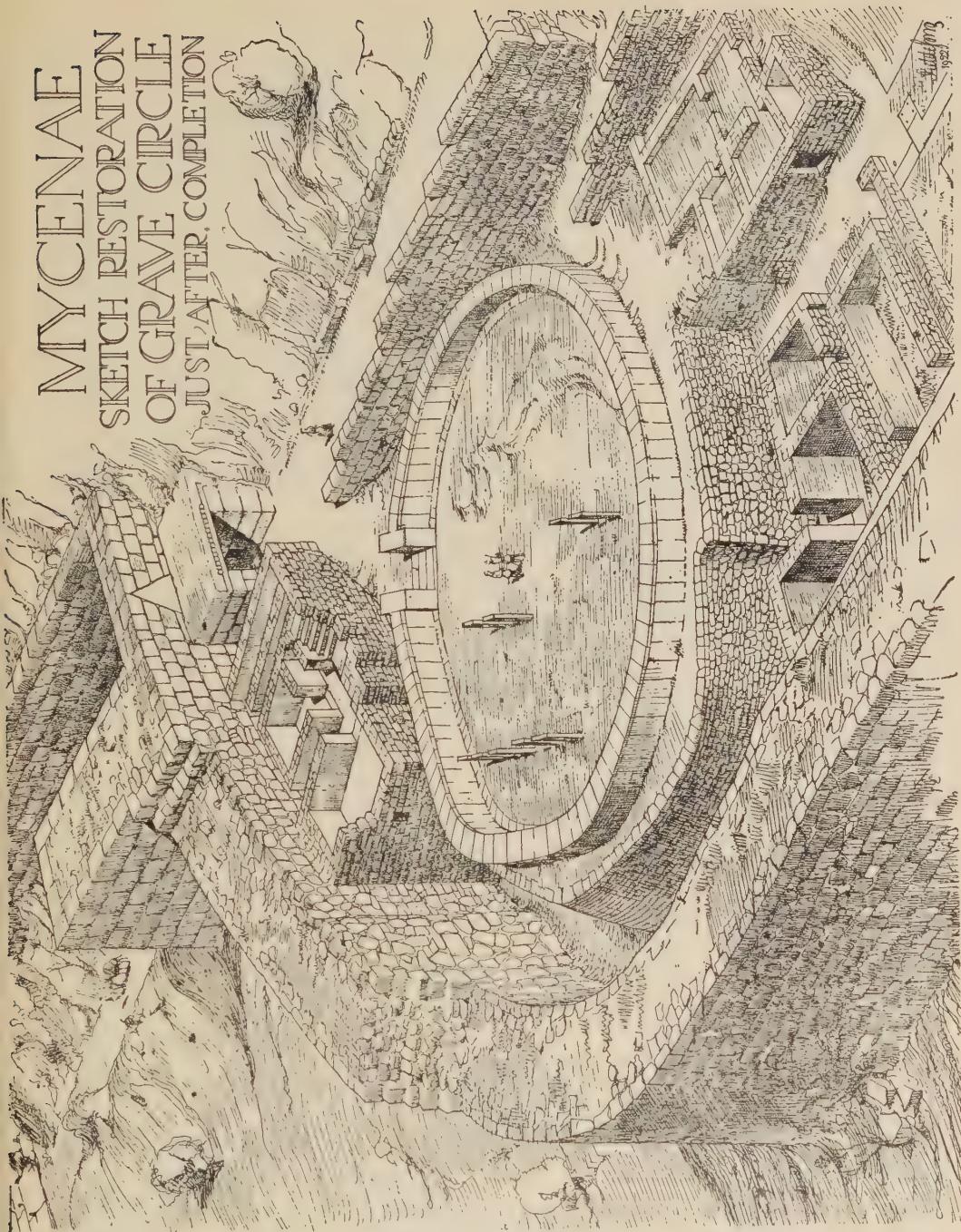


FIG. 3. GRAVE CIRCLE, MYCENAE
From Annual of British School at Athens, by permission

ANTIQUITY

apparently had a colonnaded court like the palace at Tiryns, seems to have been of considerable size. The northeast corner of the enceinte is an addition made, perhaps in the thirteenth century, to strengthen the defences and to afford efficient protection for the secret approach under the walls to the subterranean cistern outside, which provided an unfailing supply of water in case of siege. On the north side below the palace was the second gate of the citadel, the so-called postern gate, which is smaller than the Lion Gate but like it placed at a set-back in the line of wall so that it could be more easily defended. The way to it within the walls was also thoroughly guarded. There is too a small sallyport on the south side of the northeast angle carefully placed so that it would not be too obvious to an approaching foe.

Outside the citadel there was no lower town in prehistoric times as was once believed, but apparently the civilian population lived in small hamlets scattered about the country wherever a favourable situation offered. One such was the Kalkani hill which lay to the west near the spring called Epano Pegadi and was inhabited throughout the Bronze Age. In the Late Bronze Age the inhabitants of these settlements buried their dead in groups of tombs which were dug out of the soft rock of the hill sides in the form of chambers entered by narrow passages. These were family tombs and were used by generation after generation from the sixteenth century down to the fall of Mycenae. Scientific excavation of these tombs has given a vivid picture of Mycenaean funeral customs and rich finds of bronzes, gems, gold jewellery, weapons, carved ivory, and painted pottery.

The most imposing monuments outside the walls are, however, the nine beehive tombs. These were the graves of kings who succeeded those buried in the Shaft Graves. The beehive tombs are royal or elaborate versions of the private citizens' chamber tombs. They are dug out in the same manner in the hill sides, but are lined with circles of vaulted masonry, and are entered by imposing doorways spanned by huge stone lintels. The earliest, which date from the turn of the sixteenth and fifteenth centuries, are built in a cyclopean manner of undressed stone except the largest, the so-called Tomb of Aegisthus, which lies just below the Lion Gate and has a façade of ashlar work in limestone added some time after its first construction. The tombs of the second group of three are built in a more solid manner with dressed or partly dressed stone, and all have doorways of ashlar work in limestone and conglomerate with massive lintels and relieving triangles above. The largest and latest of this group, the Lion Tomb, which



FIG. 4. TOMB OF AEGISTHUS
From Annual of British School at Athens, by permission

ANTIQUITY

lies just north of the Lion Gate, is about fourteen metres in diameter and its doorway was most solidly built and was closed by an actual door. Its entrance-passage too was lined with ashlar work in limestone. The last group, which dates from the fourteenth century, includes the two most famous monuments of Mycenae—the Treasury of Atreus and the Tomb of Clytemnestra. The three tombs of this group are built throughout of hard conglomerate in the most massive manner. The smallest and earliest, the Tomb of Genii, is in almost perfect condition and the next in point of date, the Treasury of Atreus, is also in amazing condition after all the vicissitudes of over three thousand years. Many of the enormous blocks of conglomerate are sawn, and the great lintel that spans the lofty door weighs over one hundred tons. The façade was ornamented with reliefs of coloured stone and with decorated columns of green limestone. The tomb is 14.50 metres in diameter and only slightly less in height. The entrance passage, thirty-six metres long, is faced with walls of solid dressed conglomerate. The Tomb of Clytemnestra, which has lost the summit of its dome, is similar to the Treasury of Atreus but slightly more refined in construction and is not quite so large, being but 13.40 m. in diameter. These tombs show a gradually progressive skill in building and engineering which is indicated by the more ruinous condition of the earlier in contrast with the wonderful condition of the later tombs, due to the solidity of their construction. They are a permanent testimony to the fine craftsmanship of the Bronze Age masons and builders, working as they did without the aid of iron and to the careful planning and calculation of their architects and engineers. These buildings alone are enough to demonstrate the high degree of intellectual attainment which the people of Mycenae had reached by the fourteenth century. If, as is now generally accepted, the first Greeks entered Greece in the Middle Bronze Age, these achievements are the earliest evidence of the genius of the Greeks in architecture and in intellect. Each of these beehive tombs was probably built by a king during his reign as a tomb for himself and his immediate family, and after his interment the vault was closed with a wall of masonry across the doorway and the entrance passage was then filled with earth to prevent unlawful access. Probably, too, divine honours were paid to the departed monarch at the site of his burial. In the troubles that followed the fall of Mycenae the tombs were entered and plundered, but the tradition of their treasures was recorded by Pausanias in the second century A.D. The woman's grave in the entrance passage of the Tomb of Clytemnestra, which escaped

MYCENAE

the tomb robbers and contained many gold ornaments and two bronze mirrors with handles of carved ivory, hints at the riches which the great vaults themselves once held.

The treasury of Atreus is so similar in construction to the Lion Gate that it is hard to resist the conclusion that they are approximately contemporary. The Lion Gate and the citadel walls (except for the northeast extension) are homogeneous and all part of one definite plan. The palace too is closely connected with the citadel since the wall served to support the terrace on which the megaron was erected. Thus it is tempting to think of all these great works, the Lion Gate and citadel wall with the Grave Circle, the palace, and the Treasury of Atreus as having been built for a powerful king who had ample means at his disposal and also the services of highly skilled architects and engineers. So uniform is the planning and construction that the whole gigantic plan may have been conceived and laid out by the brain of one genius who was given this unparalleled opportunity by the pride and wealth of the monarch he served. So comprehensive a scheme of building is similar to that which the Athenians undertook under the inspiration of Pericles when they rebuilt the temples of their acropolis with the genius of Pheidias and Iktinos. The kings of Mycenae seem to have owed their wealth and power to the fact that in the neighbourhood of the citadel copper was to be found which made Mycenae an important early centre of bronze-working. This would have given a progressive race of princes at the head of an intelligent people the means of gratifying artistic, political, and military ambition.

Troy fell early in the twelfth century before a Greek confederation with Agamemnon of Mycenae at its head, and at the close of the same century Mycenae too seems to have fallen into the hands of enemies. Its palace and houses perished by fire and its royal tombs were plundered. This occurred at the beginning of the transition from the Bronze to the Iron Age and during the troubles which Greek tradition associated with the coming of the Dorians, another wave of the Greek-speaking people. The walls of Mycenae were not destroyed, but Mycenae lost her power and importance, for Dorian Argos took her place. Still, as a small city state, Mycenae preserved her independence during the Early Iron Age and through the archaic period to just after the battle of Plataea. The scanty remains show that she passed through the same stages of cultural development as other Greek states, and a series of fragments of much damaged reliefs found in the summit of the citadel, dating from the third quarter of the seventh century, rank among the

ANTIQUITY

earliest examples of Greek sculpture in relief. On the summit of the acropolis above the ruins of the Bronze Age palace a Doric temple dedicated to Athena was built, probably in the sixth century, and there was also a shrine of the hero Perseus. This city-state, being naturally hostile to Dorian Argos, followed the old tradition of the Atreidai in close friendship with Sparta. Unlike Argos, which favoured Persia, Mycenae sent its small contingent of men to aid in the pan-hellenic struggle against the invading Xerxes. Thus the name of Mycenae appears on the roll of honour of the Greek states on the serpent column erected at Delphi to bear the golden tripod dedicated to Apollo as a thankoffering for the decisive victory of Plataea. Mycenae's patriotism was her ruin. A few years later, about 470 B.C., when her ally Sparta was crippled by a disastrous earthquake and a Messenian revolt, Argos seized her opportunity to destroy her rival, weak in resources, but great in fame. She besieged Mycenae. The citadel was starved out. The walls were dismantled and the buildings, except probably the temple of Athena, were overthrown. Over two hundred years later, when the tyrants of Argos were constantly at war with the Achaean League, Mycenae was reoccupied as a small town dependent on Argos. The walls of the citadel were patched and part of the hillside and ridge immediately to the southwest were enclosed to make a lower town. In the hollow over the unnoticed Tomb of Clytemnestra a small theatre was built and on the ridge behind a gymnasium. On the fall of her tyrants Argos with Mycenae came into the hands of Nabis, tyrant of Sparta who ruled them harshly. After Argos was freed from Nabis in 195 B.C. history makes no mention of Mycenae. Later writers believed it to be desolate and Pausanias, who visited it in the second century A.D., does not speak of habitation. Some remains of the early Roman imperial period have been found which would imply at least a small population. Soon after, however, it must have become entirely deserted. The identity of the site was never lost and so when European travellers in modern times began to visit Greece Mycenae was naturally one of their goals. The ruins were plundered by British peers and Turkish pashas in search of treasure and not till Schliemann came in 1874 was scientific excavation begun. This, under Schliemann's inspiration, has rediscovered for mankind the long forgotten civilization of Bronze Age Greece, the golden and heroic age dreamt of by classical Hellas.

The Recent Excavations at Avebury

by ALEXANDER KEILLER and STUART PIGGOTT

THE most impressive megalithic monument in the world, which has come to be known as the 'Avebury Complex', lies on a spur of the Middle Chalk running northwestwards from the main massif of the North Wiltshire Downs. Immediately to the west runs the river Kennet. The monument consists of an approximately circular bank with a ditch on its inner side enclosing a level area of $28\frac{1}{2}$ acres. On the inner edge of the ditch stood a circle of standing stones. Inside the circle again stood two interior settings of standing stones, each consisting of a double concentric circle, that to the north having in its centre three stones forming the so-called 'Cove', and that to the south a monolith. There was one original entrance through the bank and across the ditch at the south, and to this entrance an avenue (usually called 'The West Kennet Avenue') consisting of a double line of standing stones placed in pairs, averaging 50 feet apart transversely, and at average longitudinal intervals of 80 feet, led for a distance of over a mile from two small concentric stone circles on Overton Hill, known as 'The Sanctuary'.

A second avenue, 'The Beckhampton Avenue', has sometimes been claimed to have run to the Avebury circles from the southwest, where two stones, 'The Longstones', stand, and were considered by Stukeley to be part of such an avenue. In the writers' opinion, however, it seems more likely that, as originally suggested by Schuchhardt many years ago,¹ the Beckhampton standing stones represent the remains of an independent stone circle with an avenue, of which Stukeley saw the remains, running from it towards the Kennet. It seems very improbable that an avenue to the Avebury Circles should have crossed the river as the assumed Beckhampton course would make it do, and the suggested interpretation has parallels at Stanton Drew, and, indeed, at Stonehenge itself.

In the case of Avebury the source of the stones was purely local.

¹ *Prähistorische Zeitschrift*, 1910, II, 315.

ANTIQUITY

These were derived from the isolated boulders of the resili-cified silicious sandstone known as 'sarsen'. It would appear probable that to avoid the steep gradients entailed by a direct route the stones were transported to Avebury along the line followed by the West Kennet Avenue, presumably by means of haulage and rollers—a method of transport which in the case even of the larger stones has been proved by the writers, by experiment, to entail considerably less labour on level ground than might be supposed.

Excavations in the West Kennet Avenue were begun in 1934 by The Morven Institute of Archaeological Research under the joint direction of the writers. The primary purpose of these excavations was to establish the exact course followed by the avenue, and furthermore, if possible, to arrive at a definite date and culture for the construction of the monument. The opportunity was taken by the excavators of re-erecting all fallen stones, and stones which, as will be later described, were found to have been buried (FIG. 11). The entire course of the northern third of the avenue had been exposed by the end of 1935. Prior to excavation the only visible signs existing, for even the approximate course of this part of the avenue, consisted of three standing stones and nine others which were lying prone; a tenth had fallen and had been re-erected in 1912, but in an incorrect position as well as upside down.² The evidence on which the excavators relied was naturally the discovery of the stoneholes or sockets in which stones had stood. All except one of these were satisfactorily identified; in the case of this stonehole (no. 15)³ there is no reason to suppose that no stone stood between nos. 13 and 17, but it may be presumed that the stonehole was so shallow as not to penetrate the subsoil.

The line of the avenue was found to have taken a different course from that which had been previously assumed. Its course was tortuous but not sinuous, being laid out in a series of relatively straight sections of varying lengths, and can better be followed by reference to the plan (facing p. 418) than from a verbal description or even by observation on the ground. It will be seen that the disposition of the stones becomes curiously irregular in the last section as the Avenue approaches the Circle, the longitudinal measurements increasing, and the breadth being

² *Wilts. Arch. Mag.*, xxxviii, 7.

³ The numbering of stoneholes and stones used in this article is that adopted for convenience during the excavations and begins from the southern end of the excavated portion, the left-hand stone to an observer facing Avebury being no. 1 and the right-hand no. 2 and so on.

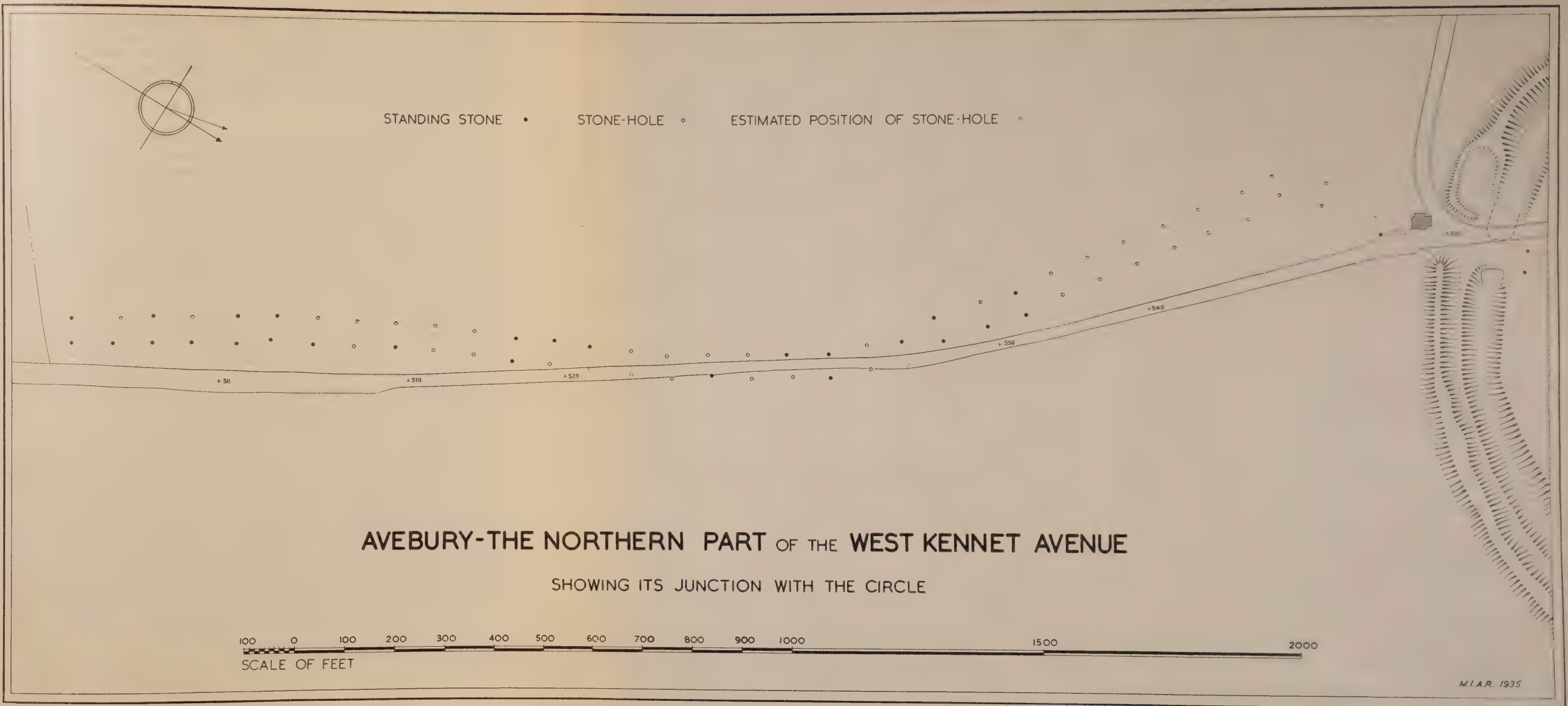


FIG. 1.

THE RECENT EXCAVATIONS AT AVEBURY

reduced between the last pair of stones to only 34 feet. Aubrey's plans suggest a similar arrangement at the junction of the Avenue with the circles on Overton Hill, while the narrowing at least was confirmed during the excavation of this site.⁴ It is clear that the two massive stones of the outer Avebury Circle standing immediately behind the original causeway of the great ditch served as portal stones to the monument.

The stoneholes themselves must not be considered as cavities in which the stones were inserted for support, as might be the case with a posthole, but were uniformly rather shallow excavations into which, save in the case of certain flat-bottomed megaliths, were inserted entire boulders, fractured blocks of stone, or other packing material, to ensure greater stability. Considerable light was thrown during the excavations on the methods employed by the original erectors, impressions in the chalk to take supporting beams of timber, as well as stakeholes, being, in several cases, clearly visible. These stakeholes may be divided into two types. The first was represented by those situated some distance from the stoneholes themselves, which held stakes of considerable diameter, doubtless used for taking up the strain on ropes employed during the actual erection (32 on FIG. 2). The other type was considerably smaller in diameter than the foregoing, and held small stakes which were also used during erection but for reducing the friction of the stone against the wall of the stonehole (FIGS. 5 and 6). Groups of these were found in three stoneholes, in each case arranged in a roughly semicircular form against the steeper side (Nos. 21, 22; and 38 on FIG. 2).

When Aubrey first visited Avebury in 1648 all the stones of the Avenue, standing or fallen, seem to have been still in existence, but nevertheless, deliberate destruction would appear to have begun about this time, and many of the stones broken up either by simple fracture or the more complicated method, which has been so graphically described by both Aubrey and Stukeley, of heating the stone and striking along a line marked out by cold water. Ample evidence, during the excavations, of this method of destruction was recovered in the form of the blackened sides of pits dug beneath the prostrate stones, burnt fragments of sarsen, and even piles of charred straw. No more vivid representation of the whole process can be imagined than a spirited drawing by Dr Stukeley (FIG. 12), hitherto unpublished, and obviously the work of an eye-witness.

Presumably about the same time or at a somewhat earlier date

⁴ *Wilts. Arch. Mag.*, XLV, 306.

ANTIQUITY

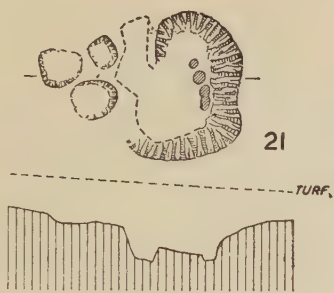
farmers, in order to facilitate ploughing, buried certain of the stones where they lay. The existence of these had in the meantime been forgotten but they were uncovered during the excavations, and together with all stones still lying on the surface were re-erected in their original stoneholes (FIG. 10).

The stones of the monument of Avebury have hitherto been erroneously referred to as 'rough unhewn blocks of sarsen'. Actually these megaliths have been dressed, and very carefully dressed, although not, it should be noted, to the flat surface obtained at Stonehenge. Moreover there can be no question but that the stones were dressed deliberately to conform to certain required shapes, and to this end stones were in the first place selected as near to the required form as possible, with a resultant economy in the labour of the final dressing. Space forbids a detailed discussion here on the question of the shapes to which the stones were formed, and it will suffice to say that these may be divided into two main types, which may be termed type A and type B, each retaining certain apparently essential features in every example. Broadly speaking type A (FIG. 10) takes the form of a tall stone considerably higher than it is broad, while type B (FIG. 9) is broader in proportion to its height, the most distinct examples resembling to a certain extent an asymmetrical diamond in shape.⁵ A well-contrasted pair actually face each other in the avenue, nos. 49 and 50. As regards size, this would not appear to have been a matter of great significance to the original builders, since even stones next each other often provide a startling contrast in this respect, although pairs of stones in the avenue compare closely the one to the other in height.

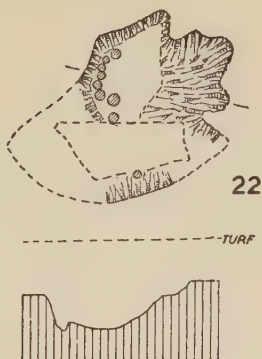
Two stones, and possibly a third, were found to bear ornament of 'cup and ring' type—circles made in 'pocked' technique (no. 2 of Burkitt's sequence of Irish techniques in *IPEK*, 1926, 52) usually but not invariably surrounding a central spot. Two well-preserved examples (FIG. 7) show irregular double concentric circles surrounding a pair of depressions, of which in each instance one is a natural hole in the sarsen and the other artificially worked. Such ornament is well-known in Early Bronze Age contexts in north Britain, but hitherto it has not been recognized from southern megaliths.

From the outset it had, as has been said, been the hope of the excavators that evidence bearing on the date of the avenue might be

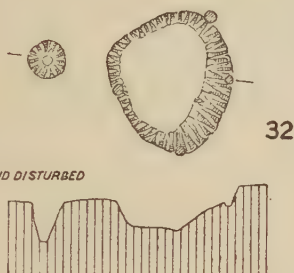
⁵ It is significant that stones have since been recognized to have been dressed to these forms in stone circles as far apart as Cornwall and Cumberland.



21

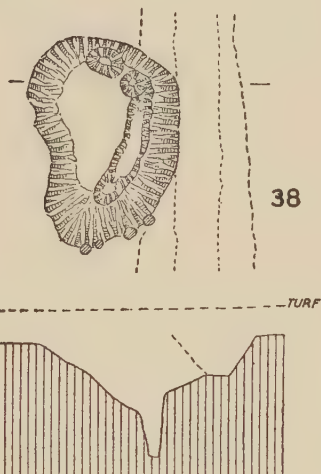


22

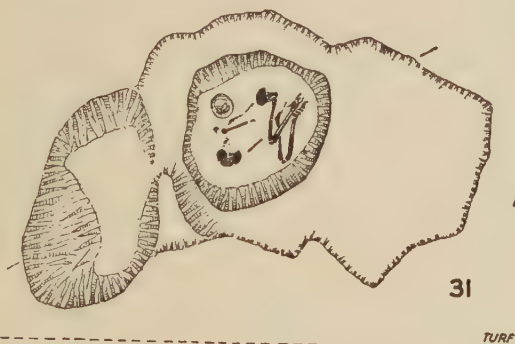


32

GROUND DISTURBED



38



31

AVEBURY-THE WEST KENNET AVENUE

SELECTED STONE-HOLES, WITH STAKE-HOLES SHADED DIAGONALLY AND SUBSEQUENT DIGGING SHOWN WITH A DOTTED OUTLINE

THE INTERIOR OF THE AVENUE IS TO THE RIGHT IN EACH INSTANCE



FIG. 2

ANTIQUITY

obtained, and this hope was fulfilled beyond expectation, for such evidence proved to be abundant and consistent.

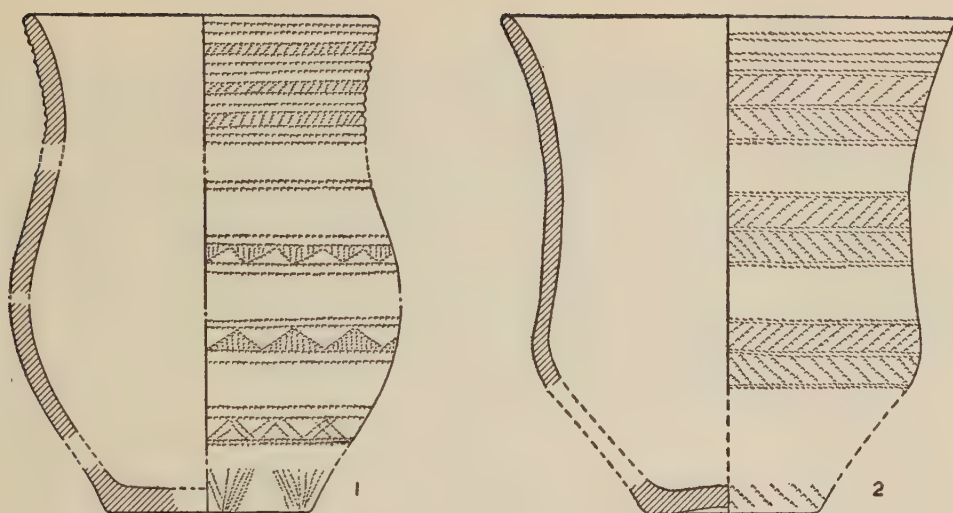
The first clue to the culture and date of the construction of the avenue was afforded by the fact that a habitation-site was found around stones 11 to 20. Structurally, nothing was present but a number of hearths or fire-pits and two rubbish-pits, with no indication of huts or other structures. Over the whole area occurred numerous potsherds uniformly of Neolithic B types, and a very individual flint industry, characterized by the presence of 'petit tranchet derivatives' of all forms, and knives and scrapers with polished edges recalling that from the West Kennet long barrow. Fragments of two axes of the augite-granophyre of Graig Lwyd were found, and an arrowhead of Portland Chert. The most striking find of imported stone was however two fragments of Niedermendig lava, from the Andernach region of the Lower Rhine, which rock had previously been found in an Early Bronze Age context by Mrs Cunnington at 'The Sanctuary'.⁶

In the rubbish-pits were found numerous animal bones, and sherds with cordons recalling certain members of the 'groove-ware' family (*e.g.*, Sutton Courtenay). In the upper part of pit 1 was found a fragment of the base of a beaker identical with that from the burial by stone 25, and it seems probable that the absence of beaker elsewhere in the habitation-site may be a cultural rather than a strictly chronological distinction. There can, we think, be little doubt that the habitation-site antedated the construction of the avenue across it, but the difference in time need not have been more than a matter of a year or so. In the Avebury region it is almost impossible to regard the Neolithic B and Beaker cultures as other than broadly contemporary, but the two groups of people may well have lived side by side without cultural interchange.

More precise evidence of date however was found in the form of burials at the foot of stones. Four such burials were found, against stones 18, 25, and 39, and beside stonehole 31 (FIG. 8). With the first two, beakers of type B were found (FIG. 3). The burial by stone 39 had no grave-goods, but that by stonehole 31 was accompanied by a remarkable bowl (FIG. 3) which is without precise parallel, although certain handled vessels from Dorset and the Isle of Wight seem to offer the best analogues.⁷

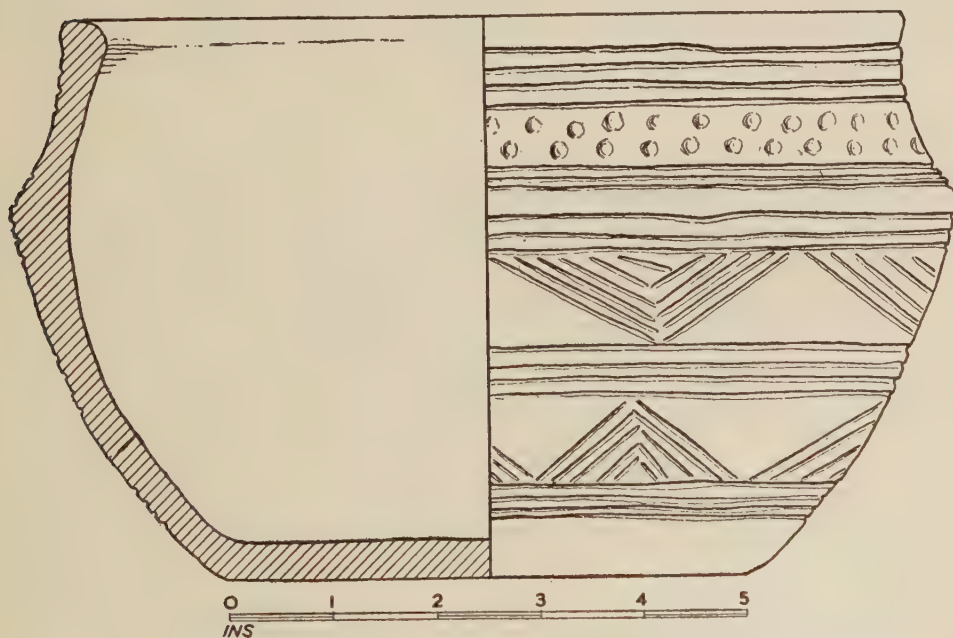
⁶ *Wilts. Arch. Mag.*, XLV, 332.

⁷ *cf. Proc. Prehist. Soc.*, 1935, 147.



0 1 2 3 4 5 6
INS.

AVEBURY - THE WEST KENNET AVENUE. Beakers from burials at the foot of stones.



0 1 2 3 4 5
INS

FIG. 3. ABOVE, BEAKERS FROM BURIALS BY STONES 25 (1) and 18 (2); BELOW, BOWL FROM BURIAL BY STONEHOLE 31

ANTIQUITY

It is a noteworthy fact that all four burials were placed on the northeast of their particular stones, that is to say, while the burials beside stones 25 and 39, and stonehole 31, were on the inner side as regards the avenue, that beside stone 18 was on the outer side. The graves beside numbers 18, 31, and 39 were separated by a short distance from the stoneholes themselves, and although strong presumptive evidence would exist for their contemporaneity with the construction of the avenue, it would have been possible, however improbable, for these burials to have taken place after, or even before, the erection of the stones. Not so the burial by stone 25, however, since in this case the grave actually formed part of the stonehole itself, and there is adequate evidence that the burial had taken place after the erection of the stone, but while it was artificially supported in its position and before the filling of the stonehole together with the packing stones had been forced into position, a proceeding which, incidentally, had been responsible for some degree of damage, through crushing, to the skull.

This association of beaker burials with stones of the avenue at Avebury is in accordance with the evidence previously recorded from the Longstones near Beckhampton⁸ and at 'The Sanctuary',⁹ where in each case a burial with a B beaker was found against a stone.

In addition to these burials, ritual deposits of flint flakes and other implements, and animal bones, were found in several stoneholes—a practice which has parallels in Brittany.¹⁰ The most important object found in such a deposit was a sherd of Early Bronze Age 'groove-ware', of the type to which the Woodhenge pottery belongs (FIG. 4). This occurred in association with animal bones and flint flakes in stonehole 45. Scraps of beaker were found in two stoneholes, nos. 9 and 52, while in stonehole 67 was found the upper part of a small bowl of burnished reddish-brown ware, with an everted lip and shoulder in an almost Iron Age style. We can suggest no significant parallel to this remarkable vessel. The accompanying table (page 427) shows the incidence of finds associated with the stones. Apart from those already described, an axe of foreign stone from stonehole 13 and the arrowhead fragment of olivine dolerite from stonehole 66 should be noted.

This evidence of date from the avenue is in accordance with that

⁸ *Wilts. Arch. Mag.*, xxxviii, 5.

⁹ *Wilts. Arch. Mag.*, xlv, 313.

¹⁰ du Chatellier, *Les Epoques Préhistoriques dans le Finistère* 26.

PLATE I



FIG. 5. STAKEHOLES AGAINST REAR OF STONEHOLE 22



FIG. 6. AS FIG. 5, BUT WITH ANTI-FRICTION STAKES RESTORED. (See p. 419)

PLATE II



FIG. 7. INCISED ORNAMENT ON BACK OF STONE 25. (See p. 120)

PLATE III



FIG. 8. BURIAL BY STONEHOLE 31. (See p. 422)

PLATE IV



FIG. 9. STONE 18, REPRESENTATIVE OF TYPE B. (See p. 420)



FIG. 10. STONE 45, REPRESENTATIVE OF TYPE A, LYING AS BURIED BESIDE ITS STONEHOLE PRIOR TO EXCAVATION. (See p. 420)

PLATE V



FIG. 11. SOUTHERN PART OF EXCAVATED AVENUE AFTER RE-ERECTION OF STONES. (See p. 418)

PLATE VI



MS. Gough Maps 231

Anbury 11th to 13th May 20. 1724.

FIG. 12. DRAWING BY WILLIAM STUKELEY SHOWING DESTRUCTION OF SARSENS AT AVEBURY BY THE FIRE-AND-WATER PROCESS. (See p. 419)
(Bodleian Library, MS Gough Maps 231)

PLATE VII



FIG. 13. NATIVES OF FRENCH GUINEA DESTROYING ROCKS BY THE FIRE-AND-WATER PROCESS DURING ROAD-CONSTRUCTION. [See p. 426]

Ph. Enzo de Chételat, 1932

THE RECENT EXCAVATIONS AT AVEBURY

from the Circle itself, where the fragment of Neolithic ware was found by Mr Gray beneath the vallum,¹¹ and the 'petit tranchet derivative' found similarly on the surface in Sir Henry Meux' trench,¹² point to a date in the Early Bronze Age. During the excavations of 1935, a most interesting link between the building of the avenue and the digging of the great ditch was provided by the occurrence of packing-blocks of Lower Chalk in stonehole 57. As has been said, the Avebury monument stands on Middle Chalk, but the depth to which the ditch was dug

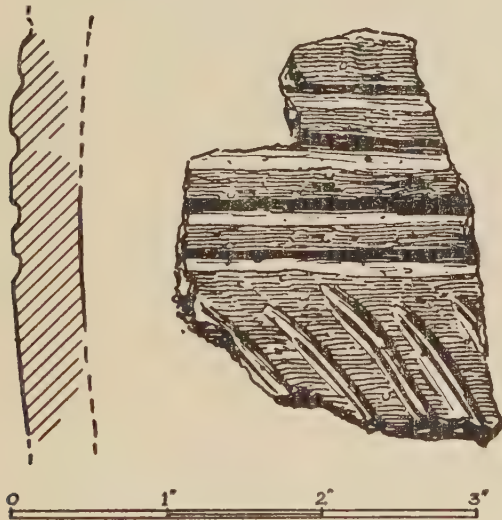


FIG. 4. SHERD OF EARLY BRONZE AGE 'GROOVE-WARE'
FROM STONEHOLE 45

makes it geologically probable that Lower Chalk must have been reached at certain points. It is consequently a reasonable presumption that it was from this material dug from the lower levels of the great ditch that the packing material in stonehole 57 was obtained. Assuming that the stones of the Circles must have been brought into position before the barrier of bank and ditch was made, and since we now see that in all probability the avenue was being constructed at the same time as this ditch was being dug, an interesting sequence of construction is provided.

¹¹ *Archaeologia*, LXXXIV, 137 and 140.

¹² *Wilts. Arch. Mag.*, XLVII, 288-9.

ANTIQUITY

Quite unexpected light was thrown on the state of the avenue in later prehistoric periods by the presence in the vicinity of stones 1 to 8 of a curious flint industry, almost certainly of the Early Iron Age, and contrasting very strongly both in workmanship and patination with the Late Neolithic series from the habitation-site mentioned above. Of these stones six were still in existence, although all lay prone on the ground, and it was found on excavating the stoneholes that the upper layers of several of them contained the typical debris of flint working, which was also abundant in the immediate neighbourhood. On the other hand, such debris was not discovered under any of the stones themselves when these were raised during the course of re-erection, thus proving that the stones had fallen prior to Early Iron Age times. It is to be presumed that the hollows of the stoneholes, which at that period had not been silted up or ploughed level with the surrounding surface, formed convenient rubbish-pits for flint-knappers, and were consequently so used. Indeed, in one instance, that of no. 1, where the stone, which had an attenuated base and a disproportionately heavy top, had fallen over its own stonehole, the flint-knapper had actually dug a shallow pit at the foot of the stone corresponding to the usual position at which a stonehole was found—indeed, it strongly resembled one—and this he filled with his discarded flakes.

As the avenue proceeded up the slight hill towards Avebury, it was found that its course was crossed transversely by field boundaries that survived as 'negative lynchets', and which had obviously formed part of the extensive field-systems of the Early Iron Age and Roman periods that cover the slopes of the downs in the neighbourhood. We see therefore that, unlike Stonehenge, Avebury's significance and sanctity had been forgotten by the Early Iron Age. In fact the contemporaries of the Druids, so far from watching stately processions of mistletoe-bedizened, white-robed priests winding along the avenue, were ploughing cornfields across its line and chipping flints in the lee of its unconsidered fallen stones.

We have added an illustration to show the modern practice of destroying rock-surfaces by fire and water. This method is still in use in French Guinea. The photograph reproduced here (FIG. 13) was taken by Mrs Enzo de Chételat in November 1932, near Pita on the Fouta-Djallon plateau. It depicts the construction of a road by Foulah workmen, under the direction of the French 'Commandant-de-Cercle'. The rocks are diabase covered by laterite. EDITOR.

TABLE OF INCIDENCE OF FINDS

Stone-hole No.	Associated burials		Pottery	Flint Flakes	Flint Implmts.	Foreign Stone	Bones (animal)	Bones (human)	Miscellaneous
	Burial	Grave-goods							
9			2 Beaker sherds						
13						Butt of axe			
16			Featureless scraps						
18	On outer side of stone in separate grave	Beaker							
19			Sherds ? Neo. B.	77 (3 serrated)					
21				132	Hammerstone, scraper		Fragments		
25	In stone-hole : adult and infant	Beaker							
31	On inner side of stone in separate grave	Bowl							
39	On inner side of stone in separate grave	None							
45			Groove-ware (EBA)	8			Lower jaw pig, metapodial & horn core of ox. Rib fragments		
52			2 scraps Beaker						
53				18					
57									Lower Chalk packing blocks
59							Antler tine Fragments		
62				3	Scraper				
65				5				Head of femur & pelvic fragment	
66				2	Triangular arrow-head (burnt)		Femur of ox and other fragments		
67			Burnished ware						

Eastern Influence on Carvings at St. Andrews and Nigg, Scotland*

by CECIL MOWBRAY

AMONGST the early Christian monuments of the British Isles the Scottish† cross-slabs form a well defined group. They are related to the Irish and Manx crosses of the 7th and 8th centuries and show occasionally some connexion with Northumbrian art. But, out of motives borrowed from these different sources, there was evolved in Scotland a type of monument peculiar to that country. The erect slab was constantly preferred to the free-standing cross, and, although a flat style of carving, similar to the Irish style, was used, and many of the Irish motives—spirals, interlacing and occasionally animal-interlacing—were adopted, the spirited rendering of hunting scenes and fantastic animals, and the use of the cross, framed in the slab as in a page of manuscript, gave to these monuments a definite originality.

Amongst this, on the whole, coherent group, two monuments, those of St. Andrews and Nigg, stand out; partly by the choice of subjects represented on them, and partly by their unusual style—the use of a rather flamboyant type of ‘ronde bosse’ carving instead of flat relief. They both reveal a strong eastern influence blended in a most unexpected way with native ornament.

The St. Andrews stone (PLATE I) was considered by Romilly Allen to be an altar tomb.¹ It is made of sandstone and parts of it are lost. Originally there would have been four narrow upright slabs, one for each corner, grooved vertically to receive four thinner slabs which formed the sides of the box. Of these slabs there now remain one long side panel, one end panel, two fragments of the other long panel and two of the corner posts. The complete tomb would have measured

* I am greatly indebted to Mlle. Henry for the help she has given me in writing this paper.

† Throughout this paper the word Scottish is used with its modern meaning and not in the early medieval sense.

¹ Romilly Allen, *Early Christian Monuments of Scotland*, 351.

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

5 feet 9 inches long, by 2 feet 11 inches wide, by 2 feet 4 inches high. The long panel is divided into three compartments, the centre one containing a figure subject and the two others decorative designs of animal-interlacing. On the end panel there is a cross, covered with interlacing and with a large boss in the centre ; between the arms of the cross are four recessed panels, in two of which are small figures and in the other two ornamented bosses. The corner posts and the fragments of the other long panel are carved with interlacing and on one of the fragments there remains a trace of zoomorphic design.

Representations of David form the chief part of the figure-scene of the long side panel. From an early period David, as a prefiguration of Christ, was portrayed in Christian art. In the catacomb paintings he is shown with a sling ; on the sarcophagi with Goliath. As early as the 4th century a series of representations giving scenes from his life became popular.² An example is found on the carved wooden doors of S. Ambrogio at Milan, but there were few developments in the West and it was in Byzantine art of the 6th century that the David cycle attained its greatest popularity.³ The two most extensive series are found on the frescoes of Bawit in Egypt and on a treasure of silver plate from Cyprus, both of the 6th century. On the silver dishes from Cyprus the influence of classical models is obvious. The figure-art of east Christian silverwork is closely related to that of illuminated manuscripts and to carvings in ivory,⁴ and any portable works of art would be a possible source for the introduction of this motive into Scotland.

The large figure on the right of the panel shows David and the lion (PLATE II, D). That it is David and not Samson is made clear by the figure of the sheep in the background.⁵ ' And David said unto Saul, thy servant kept his father's sheep, and there came a lion and a bear, and took a lamb out of the flock : and I went out after him, and delivered it out of his mouth : and when he arose against me, I caught him by his beard, and smote him, and slew him. Thy servant slew both the lion and the bear '.⁶ There are two unusual points in the St. Andrews representation. One is the absence of the bear of the bible narrative, which completes the scene in the usual David cycle ;

² O. M. Dalton, *Byzantine Art and Archaeology*, 576.

³ Cabrol et Leclerc, *Dictionnaire d'Archéologie Chrétienne et de Liturgie*, IV, 302.

⁴ O. M. Dalton, *op. cit.*, 576.

⁵ J. Anderson, *Early Christian Monuments of Scotland*, I.

⁶ I. Samuel, XVII, 34-6.

ANTIQUITY

the other is that David is shown in the traditional attitude of the Chaldean and Assyrian Gilgamesh (PLATE II, c) instead of in the Mithraic attitude in which he is generally portrayed. Both attitudes are eastern in origin, but the iconography of Mithra had been transmitted by Rome throughout the West at an early period, whereas there are few examples of the Gilgamesh attitude found in Europe. One example is on the Gundestrup cauldron⁷ (PLATE II, E) ; another is on a Byzantine ivory casket (11th-12th cent.) from the cathedral at Lyon,⁸ showing a gladiatorial combat. It is unusual to find it used in Christian symbolism, but there are four examples on the Scottish slabs (FIG. 1). The St. Andrews representation of David gives the impression of being an eastern version of a classical figure. It is evidently related to the



FIG. 1. DAVID AND THE LION ON SCOTTISH CROSS-SLABS

classical figures of the 4th century sarcophagi of Italy (PLATE II, A) and southern France which belong to the tradition of the Hellenistic bas-reliefs, current in the Empire during the Antonine period,⁹ but the elaborate folds and pleats of the costume, with the ends forming a symmetrical scalloped edge, seem nearer to the formalized drapery of Byzantine art. The sword, with the interlacing pattern of its sheath, the shoes, instead of sandals, are both unusual features to find on a classical figure. The lion, which is the small lion of Assyrian art, is a

⁷ But here we are dealing with an object which may have been made in eastern Europe. It is of doubtful date and shows traces of eastern influence in the figures of elephants and the ornamental use of vegetation. See Hubert, *Les Celtes*, I, pp. 101, 152.

⁸ L. Bréhier, *L'Art Byzantin*, 47.

⁹ L. Bréhier, *Le Sarcophage des Carmes Dechaux. Études Archéologiques* (Clermont-Ferrand, 1910), and *L'Art Chrétien Primitif*, p. 14.

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

real lion, not the strange dog-like creature which generally appears in Irish and Scottish art, and, in a country where lions are unknown, must have been copied from an eastern source.

From this representation of David and the lion the meaning of the two other figures on the panel follows naturally (although here we depart from the usual David cycle) : David the hunter, on horseback ; and David, as shepherd or warrior, on foot with shield and spear.

The horseman is defending himself with a sword from the attack of a lion (PLATE IV, A). In composition this scene bears a striking resemblance to representations of lion hunts in Sassanian art (PLATE IV, B),¹⁰



FIG. 2. SASSANIAN DISH, VYATSKY, SOUTH RUSSIA
(cf. PLATE IV, B)

which go back in their origin to the lion hunt of Assyria.¹¹ The idea of a Sassanian prototype is strengthened by the fact that the horseman has a hawk on his arm, which can be paralleled by engravings on Sassanian silver dishes (FIG. 2). There do not seem to be examples in any other country of David shown on horseback. It seems quite probable that in Scotland, where hunting scenes with horsemen were popular, the sculptor should have represented David in this way, and have taken for a model a composition which had originally no religious

¹⁰ *Catalogue of Eastern Silver and Gold Vessels from the Oriental Provinces of the Russian Empire* (St. Petersburg, 1909) ; lion-hunt, nos. 54, 55 ; hunter with hawk, no. 157.

¹¹ See the bas-relief in the British Museum of a lion hunt in the reign of Assur-Nasir. pal (880 B.C.).

ANTIQUITY

significance, but which, because of the lion, could readily be associated with David.¹²

The small figure on foot is dressed in a Greek tunic and carries a spear and a small shield. Although the motive of David as a shepherd is not included in the usual David cycle it does occur fairly often in Byzantine psalters, but there treated as a sort of Orpheus scene with David playing on a harp surrounded by a group of animals.¹³

There is a curious scene on the left of the panel, where a deer with a monkey on its back, a monkey in a squatting position and a hound chasing a beast of prey, are all entwined in the branches of a tree. The use of vegetation, extremely rare on the Scottish slabs, again leads us to eastern art. There are examples of it on Assyrian and Persian bas-reliefs.¹⁴ A close analogy is found on a Coptic carved wooden chest of A.D. 600 in the Cairo Museum, where the branches of a vine are twined round the bodies of a lion and a hare. Representations of monkeys are found on Byzantine floor mosaics and the figure of a monkey riding on a deer is paralleled by a monkey on a Sassanian dish from South Russia.¹⁵

The gryphon devouring the quadruped is derived from an eastern motive which became so common in Roman and Byzantine art that it has no regional significance.

A curious point about the whole figure-scene of this central panel is the repetition of the forms. When the same species of animal is represented twice or even three times, it is portrayed always in the same attitude and, although it may vary in size, it is otherwise almost identical. There are three deer, two beasts of prey, two squatting monkeys; even the two lions are almost the same, each on its hind legs with one forepaw raised and one hanging (a favourite attitude for Byzantine lions), each with its tail curled between its legs. It almost seems as though the sculptor had had a differently shaped panel to fill than the model from which he was copying, and therefore, instead of inventing new forms, repeated the old ones.

¹² There may also be some connexion with the Coptic mounted saint.

¹³ MSS. Grec 139, f. 16, Bibliothèque Nationale, and Studium Psalter, Add. MS. 19352, British Museum.

¹⁴ See the bas-reliefs in the British Museum of the building of Sennacherib's Palace, Nineveh. A Persian example is on the Tak-i-Bostan rock sculptures, where elephants are entwined in vegetation.

¹⁵ *Catalogue of Eastern Silver and Gold Vessels from the Oriental Provinces of the Russian Empire* (St. Petersburg, 1909), no. 161.

PLATE I



THE SARCOPHAGUS OF ST. ANDREWS
By courtesy of the National Museum of Antiquities, Scotland

PLATE II



A. DETAIL OF SARCOPHAGUS
Lateran Museum, Rome



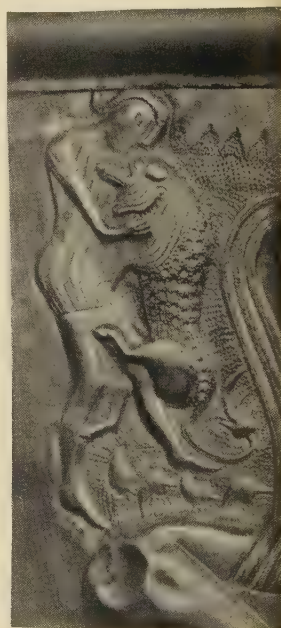
B. PAGE FROM BOOK OF MACREGOL
Ph. L. Michéli



C. GILGAMESH (8th cent. B.C.)
The Louvre, Paris



D. DETAIL OF SARCOPHAGUS



E. DETAIL, GUNDESTRUP
CAULDRON
St. Germain Museum

PLATE III



A, B. PANELS, SARCOPHAGUS OF ST. ANDREWS



C. DETAIL, LINDISFARNE GOSPELS
By courtesy of the British Museum



D. PANEL FROM CROSS-SHAFT, ROTHBURY
Ph. F. Clayton

PLATE IV

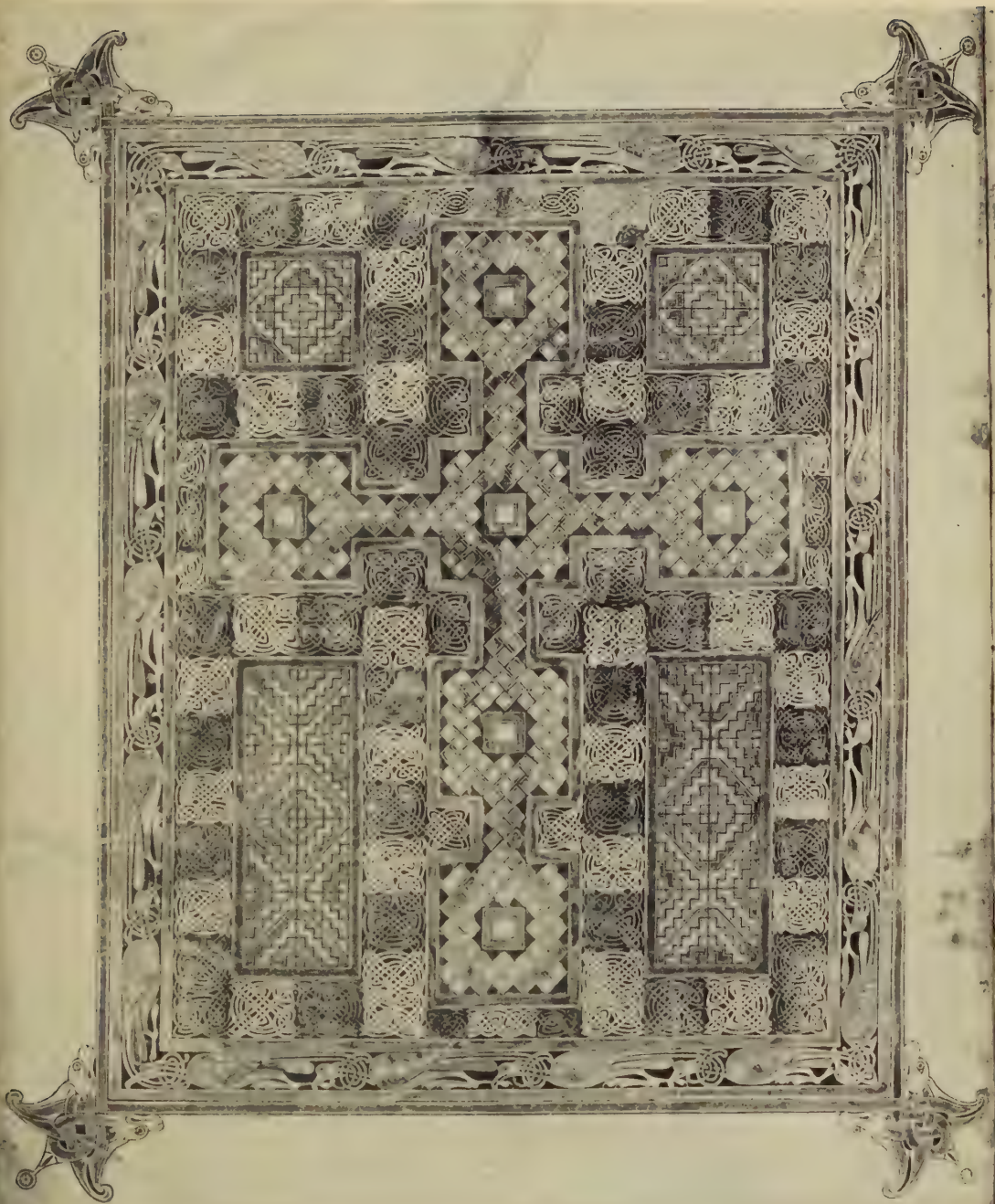


A. DETAIL, SARCOPHAGUS OF ST. ANDREWS



B. SASSANIAN SILVER DISH (A.D. 438)
By courtesy of the British Museum

PLATE V



PAGE FROM THE LINDISFARNE GOSPELS
By courtesy of the British Museum

PLATE VI



FRONT OF CROSS-SLAB, NIGG
From Romilly Allen, 'Early Christian Monuments of Scotland'

PLATE VII



BACK OF CROSS-SLAB, NIGG

From Romilly Allen, 'Early Christian Monuments of Scotland'

PLATE VIII



CROSS-SLAB, ABERLEMNO, ANGUS
From Romilly Allen, 'Early Christian Monuments of Scotland'

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

For the side panels of this slab the sculptor has taken two of the animals from the figure-scene and formed from them a purely Celtic design of interlacing animals (PLATE III, A and B, and FIG. 3) while still keeping the 'ronde bosse' technique of the centre panel. The style of animal-interlacing is close to that of the Book of Lindisfarne, where the form of the animal is still complete and fairly legible (PLATE III, C).



FIG. 3. ANIMAL FORMS, SARCOPHAGUS OF ST. ANDREWS
(cf. PLATE III, A, B)



FIG. 4. FIGURE-SCENE,
NIGG. (cf. PLATE VII)

Another parallel which is probably nearly contemporary with St. Andrews is found on a cross-shaft at Rothbury, Northumberland, where lion-like animals are disposed in a very similar pattern (PLATE III, D). It is the only example of this type of animal-interlacing in Northumbria.* The lion is nearer to the 'gripping beast' of Anglian

* I wish to thank Dr Kitzinger for calling my attention to this carving, which in his opinion can be dated at about A.D. 800. For a description and illustrations of the cross see Collingwood 'Northumbrian Crosses of the pre-Norman Age', 76 and *Archaeologia Aeliana* 1925, ser. 4, I, 159.

ANTIQUITY

art and there is probably no real connexion with St. Andrews, yet the carvings are close enough to show that they are due to a similar artistic impulse.

The carving of the remaining slabs of the sarcophagus is purely decorative, and, with the exception of the little figures of monkeys between the arms of the cross, the forms used are either Northumbrian or Celtic. The square-angled cross gives another parallel with Lindisfarne (PLATE V). The interlacing and key patterns are common to many of the Scottish stones. The raised bosses are similar to those on the Nigg stone, the latter, however, being more elaborate.

There is a very evident connexion between the carvings of St. Andrews and of Nigg, but at Nigg the style and technique are already further removed from the eastern model. The purely decorative element is stressed at the expense of the figure-scenes, which retain little of the realism of the St. Andrews work.

The Nigg stone (PLATES VI, VII)¹⁶ is an upright cross-slab of grey sandstone with a pedimented top. It is 7 feet 3 inches high and 3 feet 5 inches wide, by 5 inches thick. Unfortunately it has been broken and part of it is missing. On the front of the slab a figure-scene occupies the triangular space at the top. Below this a cross, formed of panels of interlacing, animal-interlacing and key pattern, extends over the remainder of the side. Raised bosses, scroll work and interlaced serpents fill the spaces between the arms. On the back of the stone there is a long upright panel with a figure-scene, bordered by narrow panels of interlacing and key pattern. This side of the stone is very worn and it is difficult to distinguish the figures. The slab with pedimented top is common in Coptic art, it occurs fairly frequently in Scotland, and there is one example in Ireland, at Fahan Mura, Donegal.

The figure-scene on the front of the slab is taken from St. Jerome's life of St. Paul (PLATE VI). It shows the scene in the desert when St. Anthony visited St. Paul ' and as they talked they perceived that a crow had settled on the branch of a tree, and softly flying down, deposited a whole loaf before their wondering eyes. And when he had withdrawn, " Behold ", said Paul, " God hath sent us our dinner, God the merciful, God the compassionate. It is now sixty years since I have had each day a half loaf of bread ; but at thy coming Christ hath doubled His soldiers' rations " '.¹⁷ But here the scene is used as a symbol of the Sacrament ;

¹⁶ Romilly Allen, 75.

¹⁷ Helen Waddell, *Desert Fathers* : ' St. Jerome's Life of St. Paul ', 48.

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

the loaf is in the form of a wafer and the dish below resembles a patena,¹⁸ while the two saints, with books in their hands, kneel in adoration on either side. The story is followed faithfully. Above, outlining the panel, are two trees, no doubt representing the ancient palm whose wide-spreading branches roofed the natural courtyard where St. Paul lived. The two dog-like forms are the lions which, after the death of St. Paul, when St. Anthony was lamenting the lack of a spade with which to dig his grave, 'came coursing, their manes flying, from the inner desert'¹⁹ and dug a hole in the ground with their claws, large enough to hold the body.

On the rest of this side of the slab the carving follows the style of the St. Andrews stone and of the Book of Lindisfarne. The cross is very close in shape to one used in the Lindisfarne Gospels (PLATE V) and, as Strzygowski has pointed out, it stands out in the front plane above a sunk background, an effect produced in colour on the manuscript.²⁰ The animal-interlacing and the use of a plain raised moulding to outline the panels and the cross are further points of resemblance. The raised bosses formed of interlaced serpents are similar to those of St. Andrews, but more elaborate. Strzygowski compares them to the pierced bosses on the stucco frieze at Dar-es-Suryani in Lower Egypt, which he believes to have been the work of Iranian workers in stucco for the Abbot Moses of Nisibis in the 10th century.²¹ The plain raised bosses of the lower panels resemble the Late Celtic repoussé work of Scotland.

On the back of this slab the large figure-scene (FIG. 4 and PLATE VII) is obviously derived, if not from the figure-scene of St. Andrews, at least from the same source. The carving however is flatter, the composition more disconnected, and there is a certain stiffness and lack of life about the forms. All the chief motives are there. At the top of the panel there is a different version of the motive of the gryphon devouring the quadruped; the gryphon has become a bird and the animal (which is now missing on the stone, but is recorded by an old drawing) is very much stylized. In the centre of the panel David is shown with the lion. Little remains of the figure of David except the

¹⁸ F. Henry, *La Sculpture Irlandaise* (1933) I, p. 133. Although this version of the scene occurs on several monuments in Ireland, the only example with a patena is on the Bantry stone, County Cork.

¹⁹ H. Waddell, *op. cit.* 51.

²⁰ See Strzygowski, *Origin of Christian Church Art*, 240.

²¹ Strzygowski, *op. cit.*, 240.

ANTIQUITY

left arm, with the drapery standing out stiffly in rigid folds. The lion is hardly recognizable, but the positions of the hind legs and back indicate the Gilgamesh attitude. The sheep is there, with elaborately curled fleece, and the identity of David is emphasized by the addition of the harp, another of his attributes. Above, there is David on foot with shield and spear and with a sword of Viking type. He is preceded, as at St. Andrews, by a deer and a hound. At the foot of the panel he is on horseback (almost indistinguishable on the stone, but recognizable on Petly's drawing). The hound and deer indicate the more usual type of Scottish hunting scene, rather than the eastern version of St. Andrews. Above the hunting scene there is a new figure : a man holding what appear to be cymbals. It is possibly David dancing before the ark.²² Two of the panels which form the border of this scene are filled with interlacing which is incised instead of being carved in relief ; this is most unusual on a Scottish stone.²³

The figure-scenes on these two monuments appear, as we have seen, to be predominantly eastern in origin. It is interesting to note how far the scene of David and the Lion as portrayed on the St. Andrews stone is from the Irish conception of the same scene as illustrated in the Book of MacRegol (PLATE II, B). The composition, however, with its asymmetric arrangement of figures of varying sizes, and of motives bearing no obvious relation to one another, is typical of the figure-scenes on the cross-slabs of Scotland. It is perhaps due to the Celtic tradition of ornamental art, where a figure-scene, when adopted, is treated decoratively rather than as a narrative.

The decorative motives are native ; if not Celtic in origin, then derived from that composite style which grew up on the border of Celtic and Northumbrian art.

This blending of native and foreign styles on the same monument shows that we are not dealing here with pure imitation of foreign models. In the same way that on the Bewcastle (see PLATE facing p. 385) and Ruthwell crosses there are interlacings, as well as animals copied from Mediterranean forms, so here native animal-interlacing is seen side by side with eastern figure-carving.

The technique, both of the figure-scenes and of the ornamental panels, is sculpture in the round, very different from the flat style of carving usually employed in Scotland. This leads us to the conclusion

²² II Samuel, vi, 14.

²³ Romilly Allen, p. 82. Two examples of incised interlacing occur in England. One is at Ilkley, in Yorkshire ; the other at Irton, in Cumberland.

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

that the models from which so much was borrowed—both technique and figure-scenes—must have been in sculpture, probably either ivory, metalwork or wood.

The dating of these stones is a difficult problem. The chronology of the whole series of the Scottish cross-slabs is still undecided, but they can be roughly divided into two main groups.²⁴

(1) A western group, which in its origin is related to the earliest group of Irish carvings and to the pre-Danish Manx slabs. Examples of this group are found as far north as Shetland and a few are in the Pictish territory of eastern Scotland. They are characterized by a cross on one if not both faces of the slab ; little cowed figures of monks, often carrying books and croziers ; representations of St. Paul and St. Anthony seated on chairs on either side of the cross ; a very flat style of carving, with broad surfaces and generally rather thick figures ; and simple and broad interlacing.

(2) A main eastern group, extending over the whole territory of Pictish Scotland. The style has a certain similarity to that of manuscript pages with the cross framed in a border of ornament. Monuments of this group are characterized by extraordinarily intricate thread-interlacing ; numbers of fantastic animals ; elaborate hunting and battle scenes ; some animal-interlacing ; and a flat, but more animated style of carving than that of the western group.

On the eastern group are frequently found the series of conventional motives known as 'Pictish Symbols' which, as well as occurring on these Christian monuments, are also found, unaccompanied by any other motives, on a large group of rude stone pillars all over the area occupied by the Picts, but in the largest numbers in Aberdeenshire. The question of their origin, meaning and dating is a vexed one.

There are no inscriptions to date any of the Scottish monuments, so that we have to rely on collating the different motives with other dated monuments and objects. The early group of Irish carvings, which is connected with the western group in Scotland, belongs to the late 7th or early 8th century.²⁵ Several cross-slabs of the main eastern group, for example Aberlemno no. 2,²⁶ have close connexion with the animal-interlacing of the Lindisfarne Gospels, and others have some

²⁴ For a more detailed account of the chronology and classification of the Scottish slabs, see an article to appear shortly in the *Proceedings of the Society of Antiquaries of Scotland*.

²⁵ F. Henry, *La Sculpture Irlandaise*, vol. 1, 164.

²⁶ Romilly Allen, 209.

ANTIQUITY

features in common with a late group of Irish crosses of the 8th century, and with the Bealin cross, which belongs to the early part of the 9th century.²⁷

The native decorative elements of the St. Andrews and Nigg stones provide, as we have seen, a close analogy with the Book of Lindisfarne. They are also closely connected with the style of the main eastern group, and the few slabs which are influenced by St. Andrews or Nigg belong to this group.

The slab which derives most from St. Andrews and Nigg is at Aberlemno (PLATE VIII).²⁸ It is closely connected with both stones, in style, decoration and iconography. It has similar raised bosses, sculpture in the round, the same type of animal-interlacing and key-pattern, and, at the base of the cross, a panel of interlacing which is incised and not carved in relief, similar to the panels on the Nigg stone. The two figures (FIG. 5) on either side of the cross are clearly derived from the figures of St. Paul and St. Anthony on the Nigg stone; they have books in their hands and the same curiously long-shaped heads bowed in prayer. On the other side of the slab the hunting scene is derived from another Scottish stone, that of Hilton of Cadboll.²⁹ Below this scene, at the base of the stone, are two panels, one of which contains a rudely carved and badly weathered representation of David and the lion (FIG. 6). He is unmistakably in the Gilgamesh attitude, and the sheep and harp are shown above. In the other panel there is the figure of a hippocentaur, carrying under its arm the branch usually shown on classical examples³⁰; it is perhaps the hippocentaur met by St. Anthony on his journey across the desert to St. Paul.³¹

The eastern prototypes of St. Andrews and Nigg are mostly Persian and Coptic and belong to a period between the 5th and 7th centuries. Allowing for a period of time to elapse before they reached Scotland this would fit in with the dating of the native elements at somewhere in the 8th century. This accords with the historical facts as far as they are known. Nothing can be known for certain about the original Celtic foundation of St. Andrews. The earliest form of the legend about its dedication is found in the Chronicles of the Picts and Scots. It tells

²⁷ F. Henry, 'L'Inscription de Bealin', *Revue Archéologique*, 1930.

²⁸ Romilly Allen, 214-61.

²⁹ *Ibid.*

³⁰ Baldwin Brown, *Arts in Early England*, III, 85. Hippocentaurs occur on Anglo-Saxon sceattas which may be so late as to show the influence of the Carolingian renaissance.

³¹ H. Waddell, *Desert Fathers*: 'St. Jerome's Life of St. Paul', 45.

CARVINGS AT ST. ANDREWS AND NIGG, SCOTLAND

how Hungus, King of the Picts, was promised, in a vision, victory over the Britons if he would dedicate a tenth part of his kingdom to God and to St. Andrew. After his victory, he met a monk called Regulus, a pilgrim from Constantinople, who had arrived in Scotland with the relics of St. Andrew. King Hungus gave the city where he met Regulus 'to God and to St. Andrew to be head and mother of all the churches in the kingdom of the Picts'.³² Though this legend is obviously borrowed from the story of the conversion of Constantine, the mention of relics being brought from Constantinople is interesting. Perhaps pilgrims did indeed come from there and may have brought with them other objects as well as relics.



FIG. 5. FIGURES, NIGG AND ABERLEMNO
(cf. PLATES VI and VIII)



FIG. 6. DAVID AND THE LION, ABERLEMNO
(cf. PLATE VIII)

There were two Pictish kings called Hungus. One reigned from 731 to 761; the other from 822 to 834. Skene took the view that the monastery was dedicated to St. Andrew in the reign of the first Hungus³³ and it is generally accepted that he is right. It seems probable that an altar tomb would belong to the period of the dedication. This would confirm the dating of the St. Andrews stone at about the middle of the 8th century. Nigg would be a little later.

Nigg is on the east coast of Scotland, as is St. Andrews, but it is nearly 150 miles further north. Whether there was direct contact between these two places, or whether the contact came by way of Iona

³² Skene, *Celtic Scotland*, 297.

³³ Skene, *op. cit.*, 299.

ANTIQUITY

it is impossible to say.³⁴ The Danes first destroyed Iona in the year 802 and after that it suffered periodic raids. It came to be second in importance to the monastery of Kells and to have less connexion with Scotland. Yet it remained a place of veneration and the Scottish kings were buried there for many years to come.

Owing to the recurring destruction of the Viking raids, we have very little knowledge of the type of monument that existed in Iona. There remain a few examples of an interesting group of carvings in Iona and on the neighbouring islands³⁵ of which a good example is at Kildalton, Islay. They are free-standing crosses, of the wheel-cross type connected with the Irish group, instead of slabs. Their iconography, which includes representations of the Virgin and Child (a scene which never occurs in the Scottish slabs) shows a strong Northumbrian influence; while their raised bosses and technique of sculpture in the round is close to the style of Nigg. It seems at least a possibility that they are survivals of an 8th century style in Iona, whose other monuments have perished. What part Iona had in the diffusion of the 'ronde bosse' style we have no means of knowing.

So, if we examine them closely, the carvings of St. Andrews and Nigg would appear to derive their unusual appearance from an imitation, both in style and subject, of some eastern objects. That the main group of Scottish slabs is not affected would seem to indicate that the connexion with the East was an accidental one. And these two monuments, while emphasizing the diversity of influences at work in Scotland at that time, do not have much bearing on the general development of Scottish art.

³⁴ The road from Iona to Nigg would be an easy one, following the present route of the Caledonian canal.

³⁵ Romilly Allen, 381, 384, 385, 389, 391.

Tepe Gawra

by M. E. L. MALLOWAN

EXCAVATIONS AT TEPE GAWRA. Volume I, Levels I-VIII. By E. A. Speiser, with a chapter by Dorothy Cross and occasional notes by Paul Beidler and Charles Bache. Published for the American Schools of Oriental Research by the University of Pennsylvania Press, Philadelphia, 1935. pp. 220 and 86 plates. 27s.

GAWRA is a mound lying approximately 15 miles NNE of Mosul, and a mile or two less from Nineveh. Eighty years ago Layard with his usual flair for a promising site ran a few trenches into the side of the mound, but fortunately he then had better fish to fry and contented himself with recording that 'the place is worthy of a more complete examination'. In 1927 Dr. Speiser re-examined the site with the result that a fully equipped expedition under the auspices of the University Museum of Pennsylvania, Dropsie College, and the American Schools of Oriental Research, was able to set to work in 1931. It is a happy issue that a well trained scientific expedition with 80 years of tradition and experience of archaeological method behind it has by the fruits of its labours justified the prescience of Layard. And to Layard all honour, in that while realizing the potentialities of the mound he also saw that the time was not yet ripe for its excavation.

The great accumulation that is Gawra stood in the time of Sargon of Assyria nearly 25 metres above the level of the plain. Today thanks to the labours of successive American Expeditions the mound stands for the most part at less than half that height, and layer by layer we are having uncovered for us a series of cities which take us back from the last quarter of the second millennium B.C. to the beginnings of the Chalcolithic or even to the Neolithic period.

The importance of Gawra was due to the fact that it lay in a foothill region ultimately connected with a massive range of mountains extending to Ararat, and that while caravan traffic must have kept it in touch with Iran, its nearness to Nineveh and the Tigris assured it of contacts with the lowland culture of Syria and the land of the Two Rivers. And so Gawra is linked with outlying regions towards all points of the compass and has already provided us with a most important body of evidence for inter-relating civilizations often far distant from one another. Better

ANTIQUITY

than any other site Gawra can tell us what type of civilization obtained in Assyria during those palmy days towards the end of the fourth millennium when the peoples of Sumer were becoming the first metallurgists of the ancient world, were making strides in the art of writing, and were moving apace towards the formation of a body politic which was the token of a civilized world. In short, Gawra can tell us something about the time when the land of the Two Rivers was outgrowing the inarticulate era of myth, and was evolving towards the mature development that gave us Sumerian civilization and therein the foundations of Western culture.

Gawra with its long succession of occupation levels finally took the shape of a great cone eminently suitable for excavation owing to its compactness. Its present configuration has been determined by the frequency with which the cities that composed the mound have raised its height. On the zero contour at the base the NW by SE overall measurement was not less than 130 metres, but after a rise in height of 20 metres the overall measurement at the top on the same line was not more than 10 metres. That this constant contraction in the superficies of the mound was acutely felt by the ancient builders themselves is proved by the fact that some of the later builders, as in level 6, constructed terraces to gain space, thereby, as Dr Speiser points out, hastening the final diminution of the surface. Thus in spite of the fact that after level 6 successive buildings were superimposed as closely as possible one over the other, by the end of the second millennium B.C. the building area available at the top was so small, and the height above the level of the plain so great, that the site was no longer practical for habitation, and the occupation of the mound came to an end.

This volume is concerned with 8 strata numbered from the top downwards ; but as stratum 8, the earliest level discussed, contains within itself three building levels, we are dealing with no less than ten different occupations which carry us back from approximately the 14th century B.C. to the Uruk period, or well back into the 5th millennium B.C. ; in other words from the late Bronze Age of Mesopotamia well back into the Chalcolithic.

The buildings on Gawra suggest that in the early periods the mound itself was in the nature of an acropolis built over with temples and treasuries, to which the populace living at the foot of the mound could repair in times of stress. Indeed at many periods Gawra, depending as it probably did on its reputation for sanctity, presented an interesting ancient analogy to the Yezidi shrine of Sheikh 'Adi

TEPE GAWRA

which lies within a few miles of it. To my mind another curious parallel between Gawra and the devil-worshipping centre of the Yezidis is the numerous traces on the ancient site of a snake cult; for a snake carved in stone may to this day be seen at the entrance to the Yezidi shrine.

The successive occupation levels are summarized as follows by Dr Speiser.

STRATA 1-3. 14th-17th centuries B.C. (said to be Hurrian).

The closest relations known to the author are with Tepe Billa, the detailed publication of which is much to be desired. Since the excavation of Gawra much evidence has come to light which shows that the painted pottery of the time is fairly wide-spread in Syria. We now know that material from Hammam, near Carcemish, must be contemporary, and that the ware in question, which has been extensively found at Chagar Bazar, occurs all over the Habur area of Syria.

STRATUM 4. 2250 B.C. Third dynasty of Ur. Correlated with Billa 4, A and B and Ashur E.

The dating evidence is somewhat scanty and the problem is not made easier by the presence of out-of-place pottery, some of which is admittedly earlier than third dynasty, while other specimens could on the analogy of excavations in the Habur be post-2000 B.C. *e.g.* nos. 166, 168, 194.

STRATUM 5. Sargonid, Ashur E, plan of Ishtar Temple, Billa 4 C, *c.* 2550 B.C.

This seems to be a mixed stratum with obvious overlaps on both sides.

STRATUM 6. *c.* 3000 B.C. The Royal Cemetery of Ur and corresponding material, Billa 5, Ashur G, cult stands, serpents in relief, reserved slip ware.

This was one of the richest and most prosperous periods in Gawra's history. Curiously enough the mound seems no longer devoted to temples but becomes exclusively a lay centre, with well-built mud brick houses on stone foundations. The town planning is orderly, streets are well distributed, there is a good drainage system, a central *maidan* or open square and the position of the city gates is clearly defined.

ANTIQUITY

A magnificent series of copper objects, many of them identical with material from the Royal Cemetery of Ur, illustrates the wealth of the city. The numerous needles and bobbins suggest that 'the finer textile arts' flourished at the time. The pottery reflects a different tradition from Stratum 7. The condition in which this settlement was found suggests that its last occupants had taken precipitate flight.

That the stratum was a composite one is palpably borne out by the evidence of the seals, two of which (nos. 57, 62) cannot, as I think, be pre-Sargonid, and could actually have been made during the third dynasty of Ur. Dr Speiser, quoting L. Legrain, says that the art of Sargon may well prove to be pre-Sargonid; but I cannot help thinking that there is just as much reason for saying that the art of Sargon may prove to be post-Sargonid. The fact is that the Sargonid period is one of transition, which while it has an identity of its own—especially in sculpture—reflects at both ends the influence of an archaic and of a newer period respectively.

STRATUM 7. Jemdet Nasr Period. Seals with geometric designs. Nineveh 5, Billa 6-7. Hissar 1 pottery, Billa ware. Ashur pottery ante-dating H.

This stratum, which unfortunately is ruined architecturally, seems to me to be on the border line between the Jemdet Nasr and the Dynastic period, as indicated especially by the seals. The pottery reflects both earlier and later traditions—nos. 69-71, as the author says, seem to be descended from much older Arpachiyah types, while no. 83 could perfectly well be late dynastic; and there are other types—no. 63, which look to be Jemdet Nasr. Of especial importance is the painted chalice of Billa ware, no. 58, also known as Nin. 5, since we have yet to determine how late this ware ran on. To this point we shall return again later.

STRATUM 8. Subdivided into 3 levels, A, B, C. A overlaps with Jemdet Nasr; B-C overlap with Uruk.

The temple in 8 C bears a close resemblance to the famous 'White Temple' of Uruk, and there are examples both of *Langraum* and of *Breitraum* construction. Especially interesting are the elaborated niched buttressed façades and the curious podia in the shrines; windows and the true arch also occur. In 8 A there is a diminution in the number of temples, and lay buildings increase, but I cannot see that there is adequate reason for supposing that the building centring

TEPE GAWRA

round 848 and 822 is not a temple. It seems to me that in plan this building bears a perfectly good analogy to the central shrine of 8 c, and that the discarding of the niches and recesses in the newer building may be due merely to the breaking down of the older traditions.

The pottery, as may be expected, runs from Nin. 3-4 and the stamp seals are predominantly Nin. 3. Although certain red slip ware is implied to be Uruk there is as it happens no single illustrated example which can be called Uruk ware.

Strata anterior to 8. These, which are still in process of excavation, will presumably be described by Mr Bache, but Dr Speiser volunteers the interesting information that 8-11 are homogeneous. Below that level we may presumably expect the early Chalcolithic strata corresponding to Al 'Ubaid and Tepe Halaf. A few interesting objects from that earlier age have emerged from Dr Speiser's trial trenches and show correspondences with Arpachiyah. In this category the peg-shaped painted vase on fig. 210 described as a wall-peg calls for comment, as I believe that it is a very close parallel to the unusual peg-shaped vessels of early Persepolis, and suggest an Iranian connexion.

In general Dr. Speiser's book abounds in careful description and sound comment. A few small points suggest criticism or comparison. The terracotta figurine on pl. 32, no. 3 is certainly much older than the period represented by stratum 7—it is a typical 'Mother Goddess' type of the Tepe Halaf period. The hedgehog shown on pl. 34 (a) may aptly be compared with an older painted hedgehog from Arpachiyah. On plate 78, no. 5 the incised markings on the terracotta wheel, forming a rhomboidal figure, are clearly intended to represent the curious 'wooden fellow' used on chariots of the time of the Royal Cemetery of Ur (*cf.* the Royal Standard of Ur). The clay pellet with a Nin. 3 seal-impression shown on pl. 79, no. 10, though apparently unperforated, is somewhat analogous to the 'etiquette' jar-labels from Arpachiyah. In the description of flints on p. 85 I think that some reference might have been made to sickle-blades, as many of these flints must have been used as sickles. I would suggest that some of the metal objects described on p. 109 may have been component parts of balances; seeing that so many weights, and even a scale pan has been found, we would expect some trace of scales. On p. 131 I am a little doubtful as to the wisdom of stressing the Cypriote analogies for the seal illustrated on pl. 61, no. 67, for this very coarsely cut piece is the result of palpably unskilled labour and the subject could to my

ANTIQUITY

thinking easily pass as Mesopotamian. In speaking of the reserved slip technique I think it would be well to emphasize the fact that the reserved slip ware of Gawra is actually very different from that found at Ur, and we need not therefore expect contemporaneity in the process on different sites—a point which indeed does not escape Dr Speiser.

The correspondence of one of the early temples in 8 to the much later Karaindash building of Kassite times at Warka is duly noted; incidentally there are in addition a number of other elements in the Kassite religion descended from a much older tradition—especially the Kassite symbols on boundary stones and the seal-impressions of Susa type and SIS 4 stratum at Ur.

Lastly, and to me one of the most interesting results of Dr Speiser's work at Gawra, is his conclusion on the pottery known as Ninevite 5, or alternatively as Billa ware. Dr Speiser seeks to prove that the pottery of this type dates back to the Jemdet Nasr and to the early dynastic age. To quote his words (p. 181): 'This result is to my thinking one of the most important contributions made possible by the excavation of Gawra and Billa'. On this point Dr Speiser has undoubtedly proved his case and is to be warmly congratulated thereon—moreover I believe that further excavations are likely to show that this pottery extends well back into the beginnings of the Jemdet Nasr age. For the present, the period of its undoubted *floruit* appears to be the turn of the Jemdet Nasr and the early dynastic period—on the associations not only of Nineveh but also of Tal Asmar and of course Gawra and Billa. On the other hand the fact that this pottery is now proved early should make us beware of assuming that it did not also persist for a long period of time. In Syria, as at Chagar Bazar, this pottery extends into a stratum of metal objects which I believe to be allied to the earlier half of Gawra 6. It is perhaps rash to prophesy, but I believe that future excavations will show that the late development of this pottery is to be seen in the light greenish grey empanelled ware which occurred so abundantly at Nineveh. In point of fact I do not think that there was ever as much difference in our respective opinions on the sequence of this ware as Dr Speiser would make out. On p. 181, while admitting that our opinions on the date of this ware are close enough for practical purposes, he says that our differences are more fundamental in that we are speaking of different sequences and refers to my statement in AAA, XX, p. 129, that the ware is definitely post-Jemdet Nasr. I still believe that this ware does continue beyond the Jemdet Nasr period, and would not withdraw my statement that we

TEPE GAWRA

should consider the *possibility* of a Sargonid seal-impression belonging to the end of this period. On the other hand for the earlier terminus I would quote my remarks in AAA, XX, p. 132, that H and G at Ashur contained the remains of a painted tradition very nearly extinct, and particularly my statement on p. 174 where I compared the pottery under discussion with the Tepe Ali 'Abd series, and mentioned the Jemdet Nasr associations, and the fact that the general character of the weapons from that site was pre-Sargonid. In answer to a question put by Dr Speiser on p. 155 of his book I would say that in my opinion some of the seal impressions from Nineveh discussed in AAA, XX, p. 138 from Nin. 4-5 stratum of the Jemdet Nasr period, and accepted as a terminus *a quo* for the ware, must be considered contemporary with the earliest specimens of the ware. One more point of great importance is Dr Speiser's statement on p. 153 that the decoration is at first painted (Billa 7), and gradually gives way to incised types, Billa 6 : it will be most interesting to see whether in fact future excavations at Gawra bear this out, as now that we have arrived at some measure of agreement on the sequence of Billa ware, we may hope to find more evidence for the development of this pottery. Certainly, as I have remarked before, the discoveries at Chagar Bazar show that the light greenish-grey empanelled ware came late in the series.

In effect the evidence amounts to this : that the end of the Jemdet Nasr period is practically indistinguishable from the early dynastic, and dovetails with it. The Nin. 5 or Billa ware belongs in large part to that era of transition, and no doubt eventually goes well back into the Jemdet Nasr age itself. The *floruit* of this pottery was certainly over by the Sargonid period, *i.e.* by *c.* 2550 B.C., but we must not deny the possibility that its latest stages may yet be found to reach that epoch—though possibly in marginal areas remote from its original home.

It remains only to congratulate Dr Speiser and all his colleagues on a great piece of work admirably performed. Vol. I of 'Gawra' is in itself the best testimonial to the skill of the entire Expedition, and the book is a model of conciseness, a fact for which we have good reason to be grateful seeing that day by day it becomes more difficult to keep pace with the results of excavation. The volume makes us burn with curiosity to learn of the discoveries in the bottom half of that remarkable mound, and it is to be hoped that before the lapse of many years we may look forward to the final publication of one of the most remarkable sites in Assyria.

Some Welsh Houses*

by IORWERTH C. PEATE

Keeper of Folk Culture and Industries, National Museum of Wales.

THE interaction between man and his environment, which is the basic principle of the science of Geography, is well-illustrated in a study of house-types in Wales. A detailed survey of Welsh house-types is being carried out by the Department of Folk Culture of the National Museum of Wales. It is felt that a study of the traditional types will not only throw much light on the history of culture but will also clarify some issues in the anthropological and archaeological field. This paper may be considered as a brief interim report of part of the survey, supplemented by some material already recorded.

Wales is predominantly a high moorland plateau dissected by deep valleys which run, like the spokes of a great wheel, to north, east, south and west. The rivers Dee, Severn, Wye and Usk flow northeast and southeast, providing fertile tracts to serve as entrances into the Welsh moorland for influences from the English lowlands. The southern and northern coastal plains also afford easy entrances into Wales along the fringes of the highland. Two other factors should also be noticed. The northwestern region—Merionethshire and Snowdonia—is the mountainous (as opposed to moorland) area, while the great western promontories, Llŷn and Pembrokeshire, which are open to the westerly gales, have a character of their own. To the student of house-types, all these distinctions are important: (1) the high moorland with its scattered farmsteads; (2) the oak-growing region of the great rivers which flow from Wales into England; (3) the southern coastal plain having links with Gloucestershire, Wiltshire and Somerset; (4) the Merioneth-Snowdonia area with its slate quarries and (5) the bleak lands of Llŷn and northern Pembrokeshire. Of these classes, the present paper is concerned with the first, but a word is necessary concerning the others. In the oak-growing river-valleys of the Welsh borderland the half-timbered house is characteristic. This type is to be found, for instance, in the upper Severn valley and has intruded

* A paper read (in part) before Section II of the British Association for the Advancement of Science at Blackpool, 1936. Acknowledgment is made of a small grant from the University of Wales Board of Celtic Studies towards the survey of the Radnorshire houses made in July-August 1936.

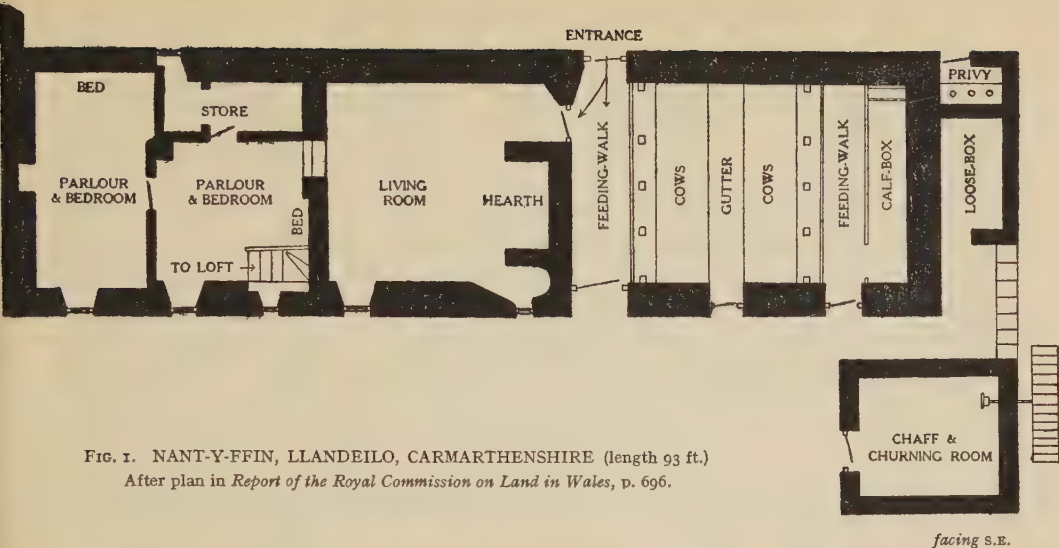


FIG. 1. NANT-Y-FFIN, LLANDEILO, CARMARTHENSHIRE (length 93 ft.)
 After plan in *Report of the Royal Commission on Land in Wales*, p. 696.

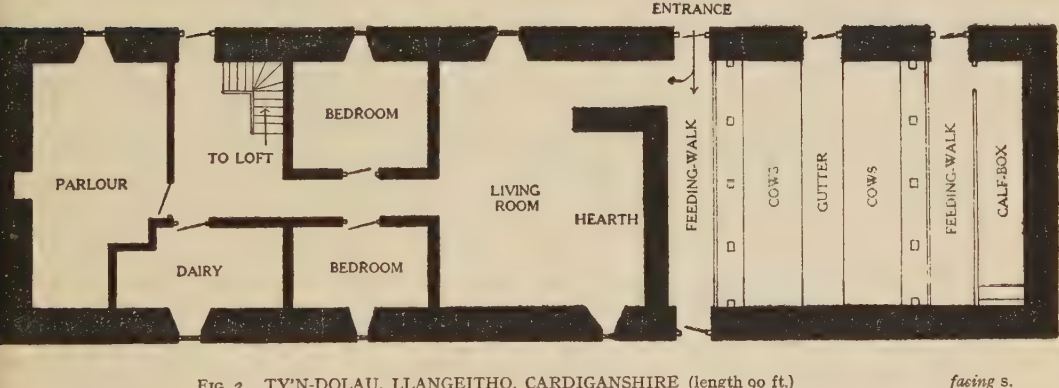


FIG. 2. TY'N-DOLAU, LLANGEITHO, CARDIGANSHIRE (length 90 ft.) facing S.

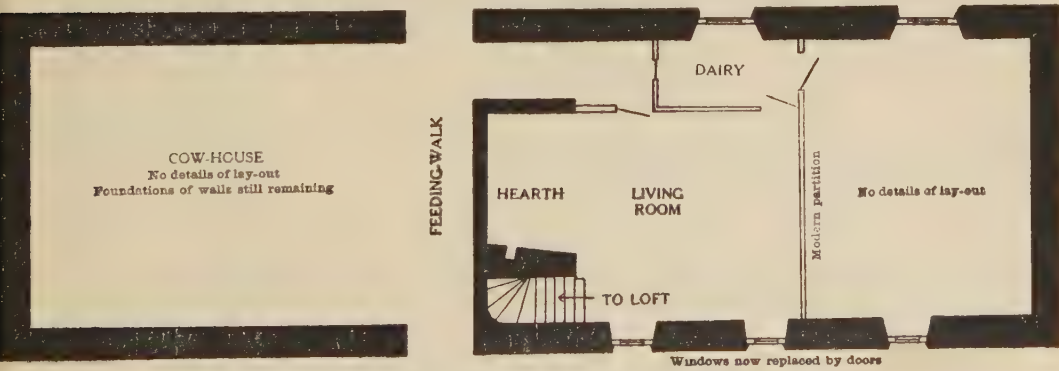


FIG. 3. NANNERTH CANOL, NEAR RHAYADER, RADNORSHIRE (length 85 ft.) facing S.E.

ANTIQUITY

over the watershed into west Montgomeryshire : the most westerly example overlooks the Dyfi estuary and Cardigan Bay in a salt-air district where the oak does not flourish. The southern coastal plain—the Vale of Glamorgan—has strong cultural links with the English lowland of which it is, in such a sense if not in other ways, a prolongation. Here are found not only pleasantly-coloured houses (*muriau gwynion Morgannwg*—the white walls of Glamorgan) but a thatching technique of a far higher order than that found on the moorland, due on the one hand to extensive wheat-growing and on the other to a virile craft-tradition probably associated with that of Wiltshire, Gloucestershire and Somerset. The houses of the slate-quarrying area of north Wales have, by the materials so produced, a character of their own ; while the bleak promontories of Llŷn and north Pembrokeshire have well-built massive stone houses of the type found, for instance, in Bardsey Island and in the St. David's district. In Pembrokeshire, this type has been influenced by the Norman castle-builders, one of the features being an adaptation for domestic purposes of the round chimneys of the Norman castles, long described erroneously as ' Flemish '.

The moorland long-house—if the term may be used—has a wide distribution in Wales. It is found in Carmarthenshire, Cardiganshire, Montgomeryshire, Radnorshire, Brecknockshire, and there are men still living who remember it in Glamorganshire. It is probable that further study will reveal a still wider distribution. From its very nature, it is a type which must disappear with great rapidity in this age of sanitary laws and centralized government. The fundamental issue which decided the lay-out of this type was the primitive need for shelter for man and animal on an open wind- and rain-swept moorland where easy access to the cattle in all weathers was a necessity. The resources for building were meagre : occasionally stone but more often clay and mud, held together by wattle or cow-hair, or both, and rushes for the roof—all the materials the products of the moorland. Peasant building knows no professional help : the peasant is both architect and builder. Having built, he is also the occupier.

The long-house is, as its name implies, a single, long, low, oblong building (PLATE I) divided into two parts ; the dwelling itself is at one end, generally called the ' upper end ' (pen uchaf) and separated from the byre or ' lower end ' (pen isaf) by a covered passage called ' penllawr ' (the head of the floor) or (in some districts) ' bing ' (FIGS. 1-3). This passage has doors, opposite one another, at each end ; back door and front door. These are generally the only entrances into the dwelling-house.

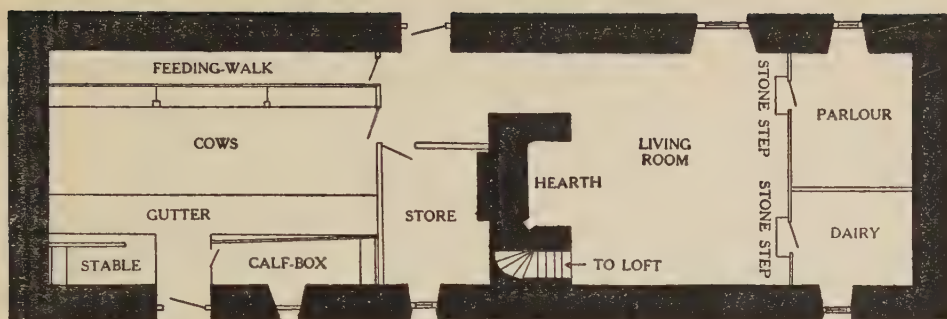


FIG. 4. LLANNERCH Y CAWR, CWM ELAN, RADNORSHIRE (length 75 ft.)

facing S.E.

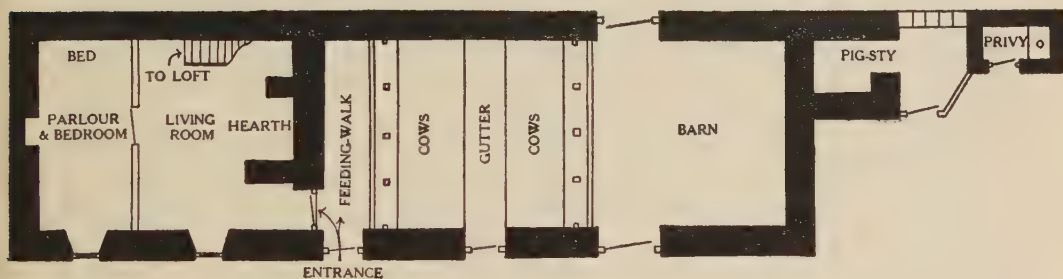


FIG. 5. LAN, LLANDEILO, CARMARTHENSHIRE (length 90 ft.)

facing S.W.

After plan in *R.C.L.W. Report*



FIG. 6. BLAENWAUN, LLANSADWRN, CARMARTHENSHIRE (length 62 ft.)

facing N.E.

After plan in *R.C.L.W. Report*

ANTIQUITY

The passage also serves as a feeding-walk for the cattle, another door serving as entrance to the byre. It is obvious from the houses examined that originally the whole building consisted only of these two parts, dwelling-house and byre, upper end and lower end. The upper end was in early times almost certainly paved, the passage (penllawr—literally head of the floor) indicating the termination of the paving: the floor of the byre was of earth. At a later date however, the dwelling-house was partitioned off into a living room and parlour-and-bedroom, and in some instances third and fourth rooms (bedroom and dairy) were so created.

Above the dwelling-house there is a loft (towlod) approached in some instances by a staircase from without and in others by a staircase from within (FIGS. 1-10): generally of stone. The floor of the loft is usually on a level with the wall-plate, the only window being in the gable-end. In Carmarthenshire,¹ the roof is set on with couples (cyplau) linked by a tie resting on the wall-plate, with rough purlins; it is thatched with straw or rushes. In several cases the first layer was of boughs and twigs, over which was placed rushes, heather or fern, with straw as the topmost covering. This loft was used for storing wool, cheese and corn and as a bedroom for the servants. In several Radnorshire cases, the houses, although conforming in most essentials with the above description, were found to be of cruck* construction and generally had stone roofs.

The walls are always of great thickness, averaging from two to three feet and all the original windows are generally on one side (the front) of the building. This is often south except where topographical and other conditions govern the lay-out of the building. The chimney places without exception are large and capacious, the older type having a wattle-and-daub louvre in which the bacon was dried after salting. These chimneys still exist and further reference will be made to them later.

Before discussing the significance of the moorland long-house, attention must be drawn to some references to it in Welsh literature

¹ I am indebted for descriptions and photographs of the Carmarthenshire examples to the report of the Royal Commission on Land in Wales (1896), pp. 690 ff., and to the Commission's Secretary, Sir D. Lleufer Thomas, who has placed in the National Museum of Wales a number of plans and photographs prepared for that report but which did not appear in it. But for his foresight this valuable evidence would have been lost.

* For this type see C. F. Innocent: *The Development of English Building Construction*, pp. 23-61.

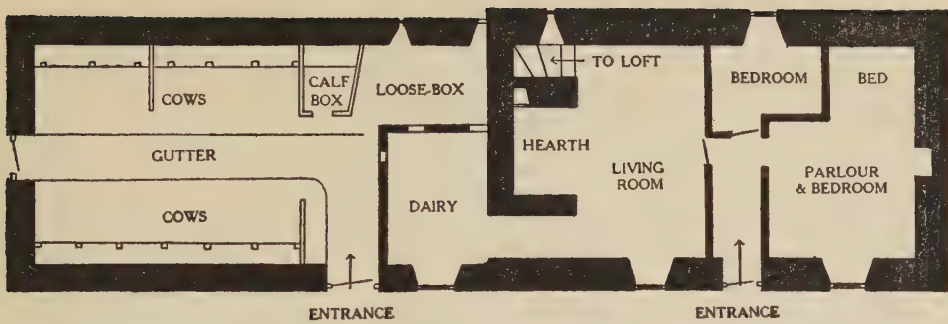


FIG. 7. CWMEILATH, LLANSADWRN, CARMARTHENSHIRE (length 75 ft.)

facing S.E.

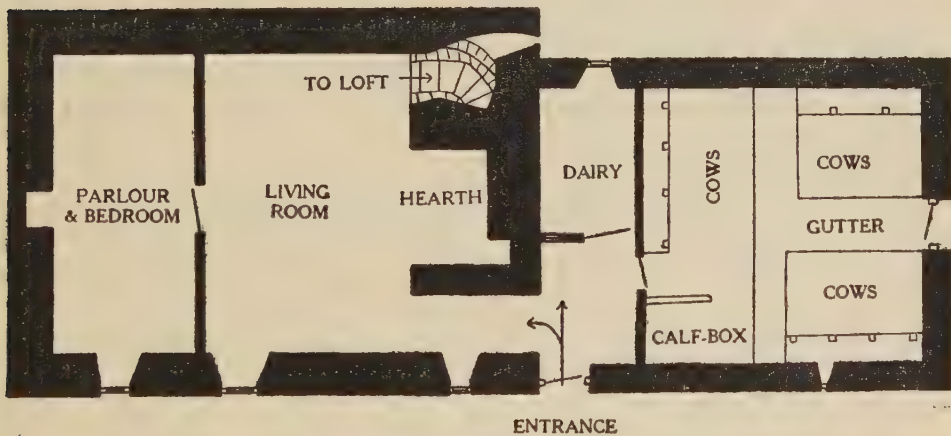


FIG. 8. ESGAIR, LLANSADWRN, CARMARTHENSHIRE (length 61 ft.)

facing S.E.

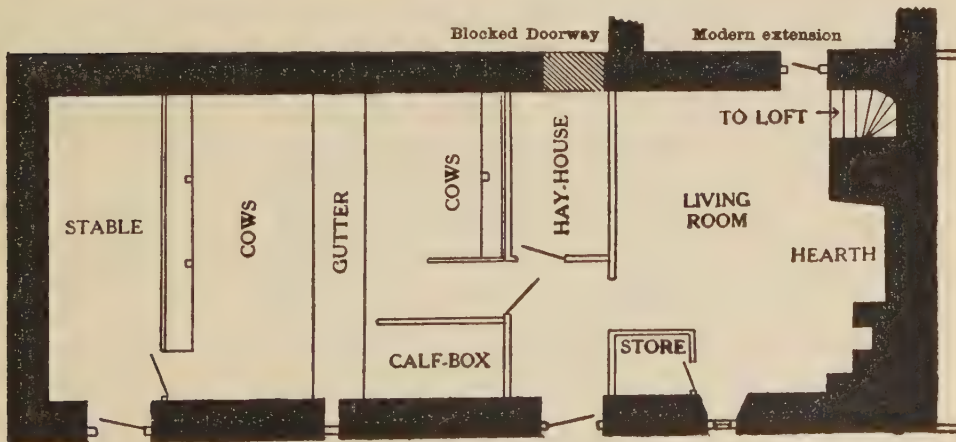


FIG. 9. CILOERWYNT, DYFFRYN CLAERWEN, RADNORSHIRE (length 57 ft.)

facing S.E.

ANTIQUITY

and records, which establish its antiquity. The most satisfactory method will be to trace its history backwards.

The long-house appears to have been fairly common on the Welsh moorland in the 19th century. It was the second half of that century which saw the beginning of its rapid disappearance. Detailed descriptions of some long-houses then in existence are given in the report of the Royal Commission on Land in Wales. Unfortunately it was not the practice of most of those English tourists who 'discovered' Wales in the late 18th century to describe houses and the next piece of evidence comes from an early 17th century manuscript² entitled 'Depositions taken the 21st April 1607 concerning the setting on fire of a barn in Machynlleth, Montgomeryshire'. We find these references: 'the said David brought in his hand into his house fire in a cowsherd . . . with which he fired some straw that he held in his hand and then delivered the same straw kindled to his wife and she went to look at some kine that were tied up in the lower end of the house'. Another witness thought 'to have the fire whereby she might have light to go to the lower end of the house to look to certain kine of hers that one of her children had that evening before tied up'. A third witness speaks of 'a cow he had sick in the lower end of his house'.

The earliest manuscript description is given in Rhonabwy's Dream in *The Mabinogion*. This tale was committed to writing in the middle of the 12th century, but much of it (as with most Welsh folk-tales) is considerably older than the manuscript in which it is found. To quote from it in translation :—

And Rhonabwy and Kynfrig Frychgoch, a man of Mawddwy, and Cadwgan Fras, a man of Moelfre in Cynllaith, came together to the house of Heilyn Goch the son of Cadwgan the son of Iddon. And when they came to the house, they saw an old hall, very black and lofty, whence issued a great smoke; and on entering, they found the floor uneven and full of puddles and where it sloped it was difficult to stand thereon, so slippery was it with the mire of cattle. And where the puddles were, a man might go up to his ankles in water and dirt. And there were boughs of holly spread over the floor, whereof the cattle had browsed the sprigs . . . And being weary with their journey, they laid themselves down and sought to sleep. And when they looked at the raised platform (*tyle*) there was on it only a little coarse straw full of dust and fleas, with the stems of boughs frequent in it for the cattle had eaten all the straw from head and foot.

Having established the antiquity of the long-house in Wales, we shall find its distribution in northwestern Europe illuminating. Dr

² P.R.O. MS. Wales 4-141-3. Reference given by Prof. E. A. Lewis of Aberystwyth. Acknowledgment is made to Miss Amy Foster, the Central Library, Cardiff, for transcribing this manuscript.

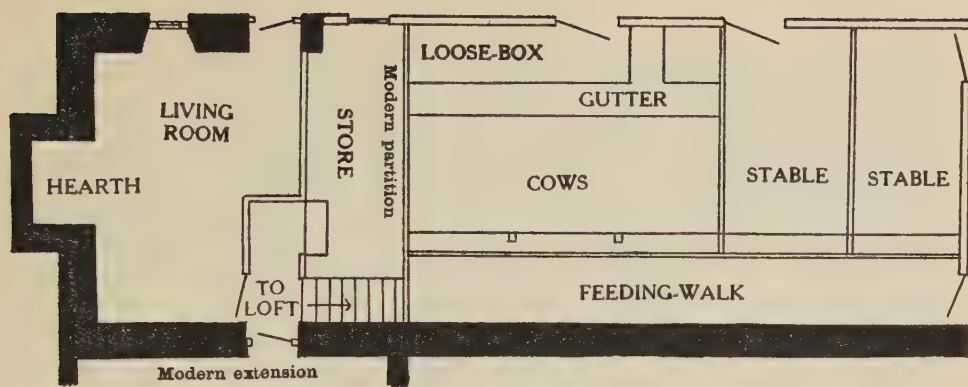


FIG. 10. PANT-Y-DRAIN, KERRY, MONTGOMERYSHIRE (length 55 ft.) facing S.W.

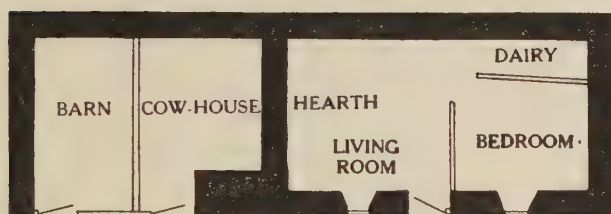


FIG. 11. GREAT MAINS (JIN'S HOUSE), LLAETHDY, RADNORSHIRE (length 36 ft.) facing S.E.



FIG. 12. PENSARN-MYNACH, CRIBYN, CARDIGANSHIRE (length 33 ft.) facing E.S.E.

ANTIQUITY

Campbell of Uppsala (to whom I am indebted for much light on various problems) has noted it in Ireland³ and points out that there also it had two doors, opposite one another, leading to the front and back; this, as we have seen, is the rule in each Welsh example which has a transverse feeding-walk. It occurred too in Cumberland. Dickinson⁴, writing in 1875, states: 'A century ago, many sets of farm buildings consisted of oblong blocks adjoining the farm yards. The dwelling at one end of the block was separated from the outbuildings by a covered passage. There was an inner door opening out of the passage into the kitchen or living room and another on the opposite side into the byre; and the passage was a common thoroughfare for men and dogs, horses, cattle, wheelbarrow, poultry, etc.'

But the type in a more primitive form is to be found in the Scottish Isles. The reader will remember that Burns⁵ in *The Cotter's Saturday Night* (II, 93-4) writes:—

The Sowpe their only hawkie does afford

That 'yont the hallan snugly chowse her cood.

The form has been described in great detail by Roussell⁶ who writes:—

Coming in from the road you bend your head and step in at the door in the middle of the long side and find yourself in a gloomy byre. Just inside the door a pavement runs right across the house but immediately on its left is a step . . . down to an earth floor. This is where the cattle are kept, on a layer of manure which grows steadily throughout the winter . . . In the gable of the byre is an opening closed with a wall of turf: every spring, when the cattle are let out into the open, this wall is broken down and there is a thorough mucking out.

We must compare with this the plans (FIGS. 7, 8) of two farmhouses in Carmarthenshire which have their byre doors in the gable-ends with the gutter running lengthwise at right-angles to the gable and not parallel with it. The survey is at too early a stage to come to any conclusion on this similarity but it may be suggested tentatively that this feature in the Welsh houses shows the persistence of an old tradition still found in the Scottish Isles. If this suggestion holds, then the type can be traced to ancient times. The gable opening, as Roussell points out, is mentioned in the saga literature and had been forgotten in Iceland before the saga 'received its finally edited form in the fourteenth century'. In this connexion, attention must be drawn to Stenberger's work⁷ on late fifth-century houses on the island of Öland

³ In *Béaloideas*, 1935, p. 68.

⁴ [W. Dickinson]: *Cumbriana*, 1875, p. 197.

⁵ I am indebted to Principal J. F. Rees, University College, Cardiff, for this reference.

⁶ Aage Roussell, *Norse Building Customs in the Scottish Isles*, 1934.

⁷ Mårten Stenberger: 'Remnants of Iron Age Houses on Öland' in *Acta Archaeologica*, 1931, II, 93-104.

PLATE I



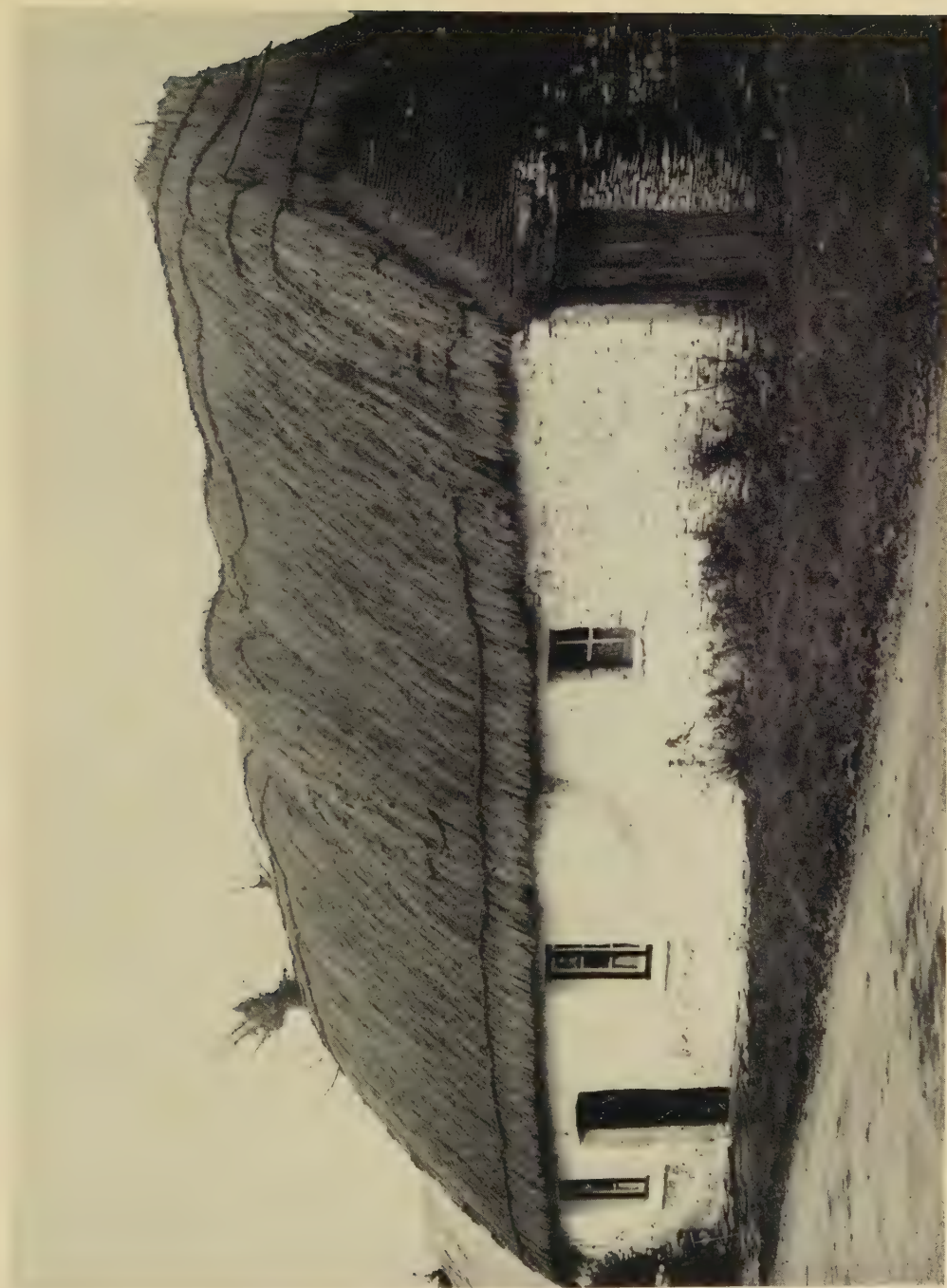
CILLOERWYNT, DYFFRYN CLAERWEN, RADNORSHIRE (see p. 450)
 A moorland long-house of 18th century date still in use (for plan see Fig. 9). The central door leads to both dwelling-house and byre. Photographed August 1936
 Ph. National Museum of Wales

PLATE II



GREAT MAINS, LLAETHDY, RADNORSHIRE (*see* p. 459 and for plan *see* Fig. 11)
A one-roomed cottage with (later) outhouse (on left-hand of photograph). Photographed August 1936
Ph. National Museum of Wales

PLATE III



PENSARN-MYNACH, CRIBYN, CARDIGANSHIRE (*see* p. 459 and for plan *see* Fig. 12)
A mud-walled cottage with later stone outhouse (on right-hand of photograph). The chimney will be seen in centre of roof.

Ph. National Museum of Wales

Photographed November 1934

PLATE IV



COTTAGE AT PONT-RHYD-FENDIGAUD, CARDIGANSHIRE (*see* p. 459)

Note inferior thatching and chimney. (The medial worn by the old lady is for long attendance at Sunday School). Photographed about 1910

W. R. Hall

SOME WELSH HOUSES

in the Baltic. Here again were found houses with two entrances—one in the side and the other in the gable end. Here also the end of the house which had the gable entrance had a floor of stamped earth while the other was paved with stones. This should be compared with the Scottish examples still in existence and with the Welsh long-house, where in each case, as we have seen, the living quarters are known as the upper end (*pen uchaf*) and the byre as lower end (*pen isaf*), the paved floor ending in the '*penllawr*' (passage). It will be recalled too that the description in Rhonabwy's Dream refers to a '*tyle*' which can best be interpreted as a raised platform.⁸ Finally, Professor W. J. Gruffydd draws my attention to a feature which has persisted to this day in many Caernarvonshire cottages. In his own home in Bethel, Caernarvonshire—a house built about 1850—with four bedrooms and a tiled kitchen, the tradition persisted of building on one side of the kitchen a raised platform of slate, six inches above the tiled floor and about two feet six inches wide. On this was placed without exception the long-case clock and the dresser, *i.e.*, the valuables of the kitchen. This seems to me to be a survival of the old '*tyle*' or paved platform of ancient times, represented in the moorland long-house by the '*upper end*', with parallels still extant in the Scottish Isles and also in fifth-century houses in Scandinavia.

It will be noticed that no reference has been made to the house

⁸ This word *tyle* was translated by Lady Guest as 'couch'. Its gender in *Breuddwyd Rhonabwy* is feminine, whereas generally it is masculine. Over a large area of Wales its one meaning is 'hill, raised ground, mound'. With this, cf. Irish *tulach*, 'hill', which seems to be related (for *-ach*=*-e*, cf. *imbárach*=*bore*). Lewis's *tyle*=Irish *tolg* 'bed' must be rejected. Irish *colg*, *bolg* correspond with *col*, *coly*, and *bol*, *boly* not with **cyle* and **byle*. But *tolg*+*lle* *i.e.* 'the place of a bed' would not only give the form *tyle* but also account for the gender of the noun in this tale, since *lle* used to be feminine. *Safle*, lit. 'place to stand' and *tyle* 'place to lie' would then be antithetical nouns. In *Ancient Laws*, i, 454, reference is made to a sow *ar y thyle* and ii, 77, 'partus suis dum sit *ar e thele*' with the explanation '[in suili]'. It is noteworthy that the sty is always raised above the sty-yard in the same way that the 'raised platform' of the house is above the byre. I am confident therefore that the *tyle* of medieval times when used in relation to buildings referred to a raised platform in house and pigsty alike on which straw was generally laid to form a bed. It may be that *tyle* 'hill' (masculine) and *tyle* 'raised platform' (feminine) are two different words derived, as suggested, from different sources: but this is a problem for the philologists to whom I leave it.

I am indebted to Dr Ifor Williams, University College, Bangor, for exhaustive references to and notes on this word, and for many suggestions. This note owes its origin to the information he has given me, but he is not of course responsible for the conclusions which I have reached.

ANTIQUITY

mentioned in the Welsh Laws which has been described by Seeböhm.⁹ Richmond¹⁰ in describing an Irish parallel suggests a Romano-British connexion but in the present state of our knowledge this cannot be substantiated, especially since, as Campbell¹¹ points out, the inferior dwelling which we are discussing may represent 'an original and inferior phase of development' in the upper-class dwelling referred to in the Welsh and Irish Laws.

Brief reference must be made to the fireplace. In all the Carmarthenshire-Cardiganshire examples illustrated, the fire is at floor-level up against the wall which separates the living-room from the byre, and from its central position represents a persistence of the central-hearth tradition, the partitioning wall behind being a later innovation. In some of the houses illustrated, built-in ovens are shown, from which it might be inferred that the built-in oven culture of the Middle and Eastern European tradition is the dominating culture of the Welsh moorland. Such an assumption would be incorrect. The practice has persisted—notably in Cardiganshire—of cooking in a baking-pot which is encased in burning turf while the 'gradell' (griddle), for baking bread is still used. We find therefore at a late date (*i.e.*, post 1850) a convergence of the built-in oven culture with that of the open hearth, the built-in oven being an importation from the English lowland.

Some of the Radnorshire-Montgomeryshire houses illustrated (FIGS. 3, 4, 9, 10 and PLATE 1) present features different from those of the Carmarthenshire-Cardiganshire area. They have however 'suffered' from reconstruction and alteration. Ciloeuwyt (FIG. 9 and PLATE 1)—dated 1734 on the lintel of the door, which is probably the date of the house—is of the ordinary type in that it had formerly a passage between upper and lower end. But the hearth is not central. It is at the gable wall in accordance with what Campbell (*op. cit.*) calls 'West-European tradition'. Nor is it in Pant-y-drain (FIG. 10), which is a good example of the adaptation of the moorland long-house to valley conditions in the oak-growing area of Montgomeryshire. Here the greater portion of the byre is built in wood. A modern brick-wall has been built to separate the byre from the dwelling, but entrance to the cowhouse is still effected by a ladder from the loft. In both Pant-y-drain and Llannerch-y-cawr (FIGS. 4, 10) the floor-level of the dwelling (or part

⁹ F. Seeböhm, *The English Village Community*, 1883, pp. 239-41.

¹⁰ I. A. Richmond: 'Irish Analogies for the Romano-British Barn Dwellings', *Journal of Roman Studies*, XXII, 96-106.

¹¹ *op. cit.*, p. 66.

SOME WELSH HOUSES

of it) is raised well above the byre.* In Pant-y-drain, a stone step leads from the 'passage' to the 'lower end': in Llannerch-y-cawr similar steps lead up from the kitchen to both parlour and dairy.

A note should be added concerning the moorland cottage. Their materials and modes of construction differ widely in different districts: the walls are of oak framing in the well-timbered counties, of stone in most districts, of mud in alluvial valleys or clay-covered plateaus where stone is not readily obtainable. The roofs are of straw or rush thatch, of stone or of slate, again according to district. No detailed classification is possible until the whole area has been surveyed in detail.

A cottage in the Llaethdy district of Radnorshire (O.S. 6 in. sheet, IV, SW)—FIG. 11 and PLATE II—known as Great Mains or, colloquially, 'Jin's House' from its last inhabitant who occupied it within living memory, is a stone-built structure with a (later) stone-and-timber outhouse at its western end. The framing of the roof is of the type already described, with purlins of rough unhewn branches. The roof is of rushes with a ridge of grass-grown clods. The one room of the cottage is divided by low board partitions into three—living room, bedroom and 'dairy' or pantry. The fireplace is of open hearth type. Above it, is a wattle-and-daub louvre.

Another cottage, Pensarn-mynach, Cribyn, Cardiganshire (FIG. 12, PLATE III) has two rooms with a central passage and a small pantry. Here again the chimney-place is of wattle-and-daub louvre type. In both cases, the smoke escapes through a hole in the thatch. There is no external chimney and this type may be regarded as the first stage in the development of the chimney. In the next stage the wattle has been extended above the line of the ridge and thatched (PLATE IV illustrates a primitive moorland-cottage in Cardiganshire). In the final stages of development the wattle-and-daub construction appears in chimney-pot form well above the ridge and is not thatched. The chimney has emerged as a feature distinct from the roof itself.

Finally, it must be reiterated that the present survey is only in its initial stages. To adapt Dr Campbell's words: by studying all old houses which are still in existence in Wales, by segregating and distinguishing the types and their distribution and by relating them to those described in Welsh literature it may be possible to solve that interesting problem—the evolution of the Welsh house.

* *cf.* also Nant-y-ffin, Llandeilo, Carmarthenshire (FIG. 1).

Notes and News

‘PRESELY’

An anonymous correspondent has protested, on a postcard, against the spelling of this name used by Mr Alexander Keiller, F.S.A., in his note on axes of Presely stone, in *ANTIQUITY*, x, 220-1. We did not ask Mr Keiller to alter this spelling because we knew that it was more correct than the spelling ‘Prescelly’ adopted on the Ordnance Maps. Both Mr Keiller and the Editor consulted Welsh-speaking scholars, with the result that both replied strongly deprecating the use of the form ‘Prescelly’. The forms preferred are Presely or Preselau, which are virtually identical, -au being pronounced like -y. Professor Ifor Williams’ reply is so instructive and full of learning that, with his permission, we quote it in full.

I am in favour of Preselau as the map form, and literary form, of this name.

The earliest form I can find is *Presseleu*, e.g., Red Book *Mabinogion*, p. 18, y *bresselev* yn dyuet, 138, hyt ym *presseleu*. The White Book *Mabinogion* in these passages has ‘y *bresseleu* (W.M. 14a) and ym*presseleu* (251a). R.B. as you know can be dated c. 1400 and W.B. c. 1300. These instances are valuable because they occur in Welsh tales copied by Welsh scribes, and are not the work of Norman scribes bungling over strange and unfamiliar Welsh words. In the first instance the name is mutated after the preposition y, and the final letter is ambiguous, for *v* stands in R.B. both for our *v* and our *u*. The W.B. form is in favour of *u*. In my edition of the *Mabinogi* (P.K.M. 140-1) I explained the name as a compound of *prys* ‘bush, wood’, and *Seleu*, a variant of *Selyf*, the Welsh borrowing from *Salomo*, Solomon. You will find the same interchange of *y* and *e* in the initial syllable of *Prysaddfed*, *Presaddfed* in the Anglesey place-name, and of -*yf* and -*eu* in the final syllable in *cleddyf* ‘sword’, and *cleddeu*, now *cleddau*. In the Pembroke river-name the *Liber Landavensis* of the early 12th century has *dou cledif* (p. 124, not *Clediŵ* as the Index), *doucledif* (127): the Red Book *Bruts* (p. 361) has *deu gledyf*. Owen’s *Pembrokeshire* (1603) has *Percele*

NOTES AND NEWS

hill for mynydd Presseleu, and *Dvngledy* for Deugleddyf on the map drawn by G. Owen (part 1) ; see also part 1, p. 103, where the river is *Cledhe*, and the mountain *Percellye* (but p. 100, *Perseley*). On p. 96 and 97 he has *Cledde*, *Clethe*, and *Cleddey*. The editor, in a note on p. 103, explains *Presseleu* (or *Presselau*) ; 'The word *presel* is said to have been locally used in S.E. Wales in the sense of a brake, or place overgrown with furze, etc.'. I have failed to find an instance of *presel* outside of Pughe's dictionary. Richards was a South Walian, and he gives only *prys*, *prysg*, *prysgoed* 'shrubs, a copse, an underwood' ; *prysgyle* 'a place overgrown with shrubs'. Lhuyd in *Arch. Brit.* does not give *presel*, though he prints columns of words omitted in Dr Davies's dictionary. Dr Davies in the Duplex Dictionary of 1632 gives *prys*, *prysg*, and *prysgoed* 'arbusta, arboretum'. But Pughe gives the whole series, *presel*, *preselaidd*, *preselawg*, *preselder*, *preseliad*, *preselu*, and *preselyn* : also *prysel* and under *preselu*, 'to become wild or overgrown', he quotes '*mae y tir yn preselu ganto*'—the land grows foul under his care. This he denotes as *Sil.*, for *Silurian* I suppose. I cannot accept a word as genuine, simply because it occurs in Pughe's dictionary—he invented hundreds from supposititious roots. On the other hand I cannot reject *prysel*, *presel*, outright : it is a possible form from *prys*, perhaps, though the *-el* troubles me. *Uchel*, *isel*, are adjectives, not nouns. *Gadel* however is a verb-noun, a variant of *gadael*, but I cannot imagine *gadelu* ! I cannot find any of these forms in the glossaries printed in the Bulletin of the Board of Celtic Studies from the Peniarth MSS : they don't occur in the copies I have of W. Llŷn's glossary (c. 1560–80). If you want to write a note on the word, give Pughe's explanation (I am using the 2nd ed.), and say that I cannot corroborate, as I've failed so far to discover an instance of it. It may crop up in a list of South Welsh dialectal forms. Who knows ? In the meantime, I prefer to stick to 'Solomon's Grove', whether wisely or not !

Whether you take *Preselau* as a plural of *presel*, or as a compound of *Pres* and *Seleu*, the later development is identical : *-eu* weakens to *-e* in most Welsh dialects (cf. *Cleddeu*, *Cledde* from an original *Cleddyf*). So *Selyf*, *Seleu*, *Sele* (cf. the Dolgellau Hywel *Sele*). Just as Dolgelleu gave *Dolgelle*, with a variant spelling *Dolgelly* (by English writers), so *Presele* varies with *Presely*, e.g., Owen's Catalogue of MSS. relating to Wales in the British Museum, III, 689, *Pressely* : Professor W. Rees's 14th century map has a *Preskely* manor, and *Preskely* forest : cf. his Deugleddy, and Deugleddy. The *Black Book of St. Davids* also has

ANTIQUITY

Preskely (Willis-Bund, Cymmrodor ed., p. 116) and on the map prefaced to this edition you will find *Priskilly*, but this is some distance away from *Preccelly* mountain. The latter is given by Rees as *Presselewe*.

I am afraid that this muddle of notes will be of little help to you. You will prefer, I think, to accept the Mabinogion form, *Presseleu*, and modernize it to *Presselau* for your map, and let the etymology be for a while, until the hunt is over for *presel*. IFOR WILLIAMS.

From this it will be seen that our anonymous correspondent's claim, that the spelling *Presely* 'is not used by any Welsh authorities' has no basis in fact. On the contrary it is the form preferred by those best qualified to judge. As regards the term 'Preselite' for the rock, which our correspondent calls 'an abomination in rock nomenclature', it is obvious, in view of the facts stated above, that the spelling of the rock-name should conform with that of the place; nor can we see why Welsh places should not be used to give names to rocks as much as any others! That is the custom of geologists, and we cannot see why it should be called 'abominable'. The principle adopted is an old-established one and was used in classical times if not before. Copper got its name from Cyprus; china-ware from China; why not Preselite from Presely?

INTRODUCTION OF THE RABBIT INTO ENGLAND

We have received the following letter from Mr W. L. ORGILL:—

'I should like to call your attention to the evidence as to the influence of rabbits on vegetation adduced by Dr E. P. Farrow in his *Plant Life on East Anglian Heaths* (Cambridge University Press, 1925).

'This book is not, as its title rather suggests, of local interest only. As a result of most careful observations and experiment the author (p. 104) reaches the cautiously worded conclusion that "apparently the presence of rabbits alone is sufficient to change the potentially dominant plant on Caversham Heath [Suffolk] from *Pinus Sylvestris* to *Pteris Aquilina* [bracken] through a long number of various stages. This is clearly a profound change. The passing of England from a forest period to a grassland period may of late have been accelerated by the influence of rabbits".

'Now if this is so the date when the rabbit was introduced into England (it is certainly not a native) is clearly of importance and it is at present quite unknown.

'The first reference to coneys I have so far found is in 1263—

NOTES AND NEWS

“ Conningeshurst ”, Surrey (English Place-name Society, xi, 239), but this of course only shows that they were then common there.

‘ There is I believe only one known reference to the pheasant in England before the Norman Conquest—in a Latin document which shows that they were an ordinary article of diet in 1059 (Yarrell, *British Birds*, 4th ed., iii, 94).

‘ If by any chance bones or other evidence of the rabbit could be found clearly dating from before the English Settlement it would go far towards explaining the local thinning of the woodlands, and especially the mysterious disappearance of the Scotch Pine.

‘ This tree was common after the Glacial Period (Clement Reid, *Origin of English Flora*) but must have been at least rare when the English arrived as it is absent from the place-names, while hundreds of them refer to other trees. This cannot have been due to any change in the climate as many less hardy and adaptable plants survived, nor do I think that all the seedlings could have been eaten off by sheep or cattle, as a considerable number must have grown where nothing but a rabbit could get at them.

‘ Taking all this into consideration it seems to me that any evidence as to the date when the rabbit was introduced should be carefully recorded ’.

PRIMITIVE WHEEL-BARROWS (PLATES I-III)

The history of the wheel-barrow has yet to be written, and a place assigned to it in the evolution of primitive transport. Possibly it is a late-comer ; it seems to have a restricted area of distribution, and its use obviously implies the existence of level ground or footpaths, if not of roads. With the exception of the Hunza wheel-barrow described below by Mrs Lorimer, examples from the primitive cultures of the past or present are hard to think of. Is it quite a modern institution ?

The wheel-barrow shown on PLATE I was photographed near Drum, co. Monaghan, Ireland. It will be seen that it has a solid wooden wheel revolving with the *wooden* axle. There are no sides and the bottom is very low and near the ground. The whole appearance recalls that of the sled-cart which is actually in use in the same place (see *ANTIQUITY*, 1935, ix, plate opp. p. 134).

The barrow illustrated on PLATE II (from Cornwall) was described by the owner as a ‘ miners’ wheelbarrow ’. The general appearance is quite different, resembling rather a box on wheels ; and it suggests derivation from a handled tray carried by two men.

ANTIQUITY

NOTE ON THE WHEEL-BARROW OF HUNZA

by E. O. LORIMER

The inhabited oases of Hunza*—alluvial slopes often as much as 500 and 800 feet above the river that has cut its way through them—are so steep, and water is so scarce, that all cultivation has to be in terraced fields ; a field only a few yards wide held up by a revetting wall of anything from 5 to 15 feet high. Access from level to level is either by stony steep tracks between loose side walls, which serve both as irrigation channels and footpaths (barefooted people finding no inconvenience in wading through water on occasion), or else by perpendicular 'stiles' formed of rough stones built into and projecting from the revetting walls. In these circumstances wheeled traffic is unthinkable and even the use of pack animals for cartage from field to field is barred.

Only on the comparatively rare occasions when a new field is being levelled and piles of sorted, graded stones and of sifted earth are being carried forward from the back of the excavated field to the raised front, is a rude barrow sometimes employed. A small ladder-like frame, consisting of two poplar-poles joined by three or four rungs is constructed for the purpose. Into a space between two rungs one of the tapering shoulder-baskets of the country is lashed. At the other end of the frame a solid horizontal section of tree trunk (roughly 11-12 inches in diameter and 7 or 8 inches thick) is impaled on a stick and inserted in lieu of another rung. The 'wheel' does not rotate on its axis, but the axis itself rotates in the two holes in the side poles. The jarring of the somewhat irregular and wobbly wheel against the sides is mitigated by two wicker rings (about the size of large wooden curtain rings) threaded on the axis at each side of the wheel. Since the distances to be traversed are slight, at most a few yards, the crudeness of the barrow, and the friction of the axis in its sockets, are of little moment (PLATE III).

It seems probable that some ingenious Hunzukuts devised this barrow on the model of a more elaborate one seen somewhere on his travels, but it may have been locally evolved, though there is no other wheel of any sort in the country. The fact, however, that the barrow is called 'araba'—an almost universal word (Arabic in origin) throughout the East for any form of carriage—seems to point to foreign inspiration.

* Hunza, the most northerly out-post of British India, is amongst the lofty ranges of the Karakoram, on the borders of Chitral, Afghanistan, and Chinese Turkestan.

PLATE I



WHEEL-BARROW ON TOWNLAND OF DRUMGRONE, NEAR DRUM, CO. MONAGHAN, IRELAND. (See p. 463)
Ph. O. G. S. Crawford, 1934

PLATE II



CORNISH MINER'S WHEEL-BARROW, IN USE NEAR ST. AGNES, CORNWALL.

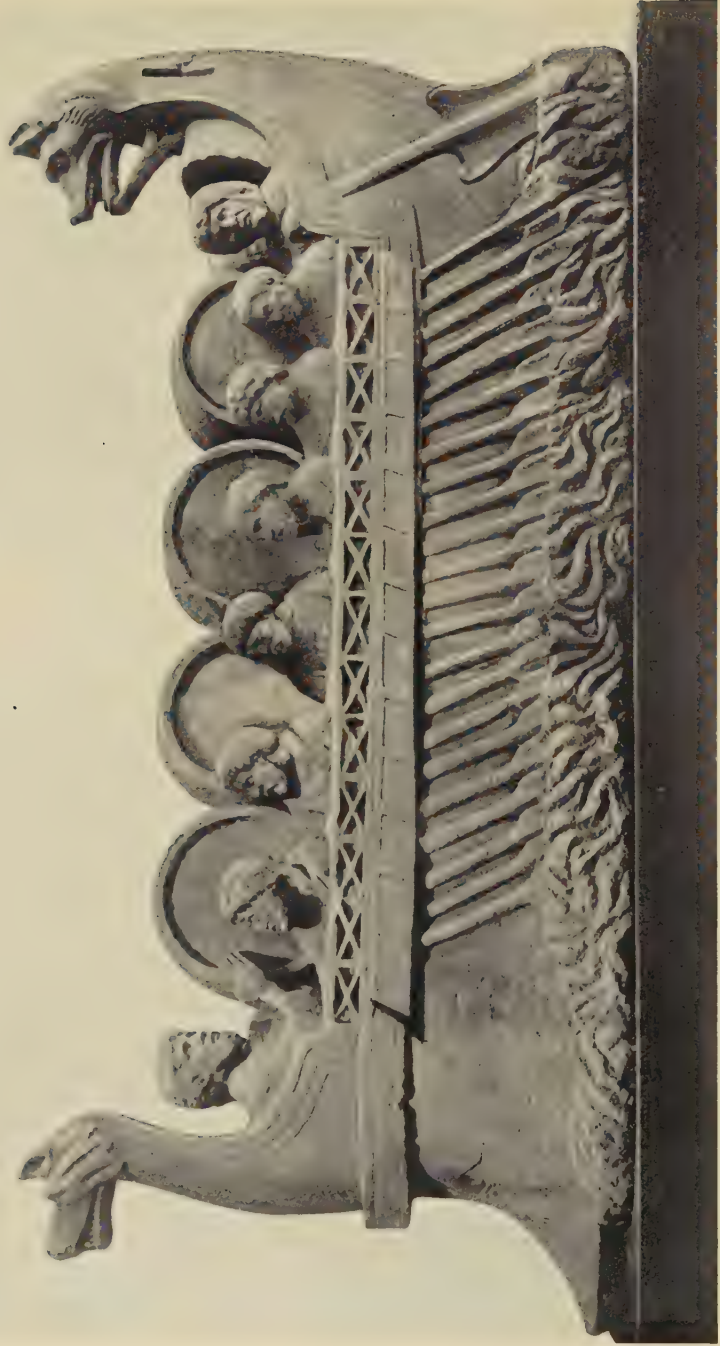
PLATE II. CORNWALL.

PLATE III



WHEEL-BARROW ('ARABA') USED IN HUNZA. (See p. 464)

PLATE IV



ROMAN BOAT, LANDESMUSEUM, TRIER. (See p. 468)
Ph. Landesmuseum, Trier

PLATE V



IBEX HORNS, SHABWA, SOUTH ARABIA. (See p. 475)
Ph. Hans Helfritz



IBEX HORNS, MAFUT, SOUTH ARABIA. (See p. 475)
Ph. Hans Helfritz

PLATE VI



GENERAL VIEW OF BASSIANAE, YUGOSLAVIA. (See p. 475)
Arch. Mus. du Prince Paul, P. Lécuyer

PLATE VII



AIR-PHOTOGRAPH, SHOWING CROP-MARKS, CATERN'S HILL, NEAR BASINGSTOKE, HANTS. (See p. 477)

Ph. R.A.F., Crown copyright reserved

NOTES AND NEWS

The ladder-like frame, however, is called ' tserang ', a native, Burushaski word used also of a door-frame.

It seems probable that the evolution of the barrow was subsequent to the introduction or invention of the runged ladder. The original ladder of the country is a notched tree-trunk, still seen everywhere in everyday use, though gradually being superseded in the more recently built houses by the runged ladder, which has probably been in use only for a generation or two.

In 14 months' residence we saw these barrows in use only three or four times and we suspected that there were in fact only two specimens in our district, and that these were lent by the proud possessors to any neighbour requiring one. They were certainly not part of the normal equipment of every farmstead.

BURWELL CASTLE

In the course of preparing the article on earthworks for the forthcoming Cambridgeshire volume of the Victoria County History it has been necessary to examine the peculiar site known as Spring Close at Burwell in the southeastern part of the county four miles northwest of Newmarket. The accompanying sketch-plan (p. 467) will show the present state of the earthworks and also other features of great interest which have recently been revealed by trial excavations. They are the remains of Burwell castle, a fortress which owed its inception to King Stephen in 1143, when he ordered the building of a series of castles to restrain the marauding Geoffrey de Mandeville, who had revolted and seized the abbey of Ramsey with its surrounding island in the Cambridgeshire Fens.

An examination of the site in the field shows at once that we are in the presence of an unfinished castle, comparable in another age to the unfinished Early Iron Age hill-fort of Ladle Hill near Newbury, Berkshire, which has been described by Mr Stuart Piggott.¹

The castle was to have had a motte and bailey, standing on a rectangular island with longer axis running east and west, left by digging a formidable moat in the edge of the higher chalk land at the south end of Burwell village overlooking the Fen. This particular spot was chosen because a powerful spring breaks from the chalk to the west of Burwell church and could be used to fill the moat.

Along the outer edges of the moat, on its northern and western sides, there now stand considerable mounds of material which has

¹ ANTIQUITY, 1931, v, 474-85.

ANTIQUITY

obviously been excavated from it, and in the inner edges of these heaps are depressions leading down into the moat (E, F, G and H on PLAN). These last are runways up which the excavated material was brought, and the dumps have never been spread as they would have been in the event of the castle being completed and put into a proper state of defence. As they stand they command the castle-site proper.

The view has been put forward that these mounds are remains of the works erected when Geoffrey attacked the place in 1143 or 1144. He seems to have found the place in a completely defenceless condition, but some resistance must have been made for, according to the Ramsey Chronicle,² and the Chronicle of Gervase,³ he was wounded by an arrow and died later at Mildenhall in 1144. The runways have been regarded as catapult emplacements, and a mass of material projecting into the bottom of the moat at the west end (I on PLAN) was thought to be an assault bridge.

This view is untenable since the runways form very improbable emplacements for siege-engines. In this connexion it is well to recall the famous siege earthworks surrounding Great Berkhamstead castle. These are the relics of the siege of 1216 when the place was taken by Louis of France, its fall being greatly hastened by the use of seven trebuchets whose emplacements are still recognizable on the site. These have a totally different character from the Burwell runways and are large platforms.⁴

It is fortunate that any further speculation about the Burwell site has been set at rest by the published results of excavation carried out on the site in 1935 by Mr T. C. Lethbridge, F.S.A., with a view to testing the siege works theory and making a general examination of the site.⁵ He has been able to show conclusively that not only are the dumps and runways definitely what they appear to be, but also that a considerable amount of chalk has not been moved from the moat along the north and south sides of the central island, while the 'assault bridge' is nothing more than another mass of undug chalk along the outer side of the moat. The curtain-wall had been built round the east and southeast sides of the site along with a small keep or gatehouse and two garderobes (K on PLAN), but has not been carried right round, so that the site must have been virtually indefensible when Geoffrey attacked it. After his

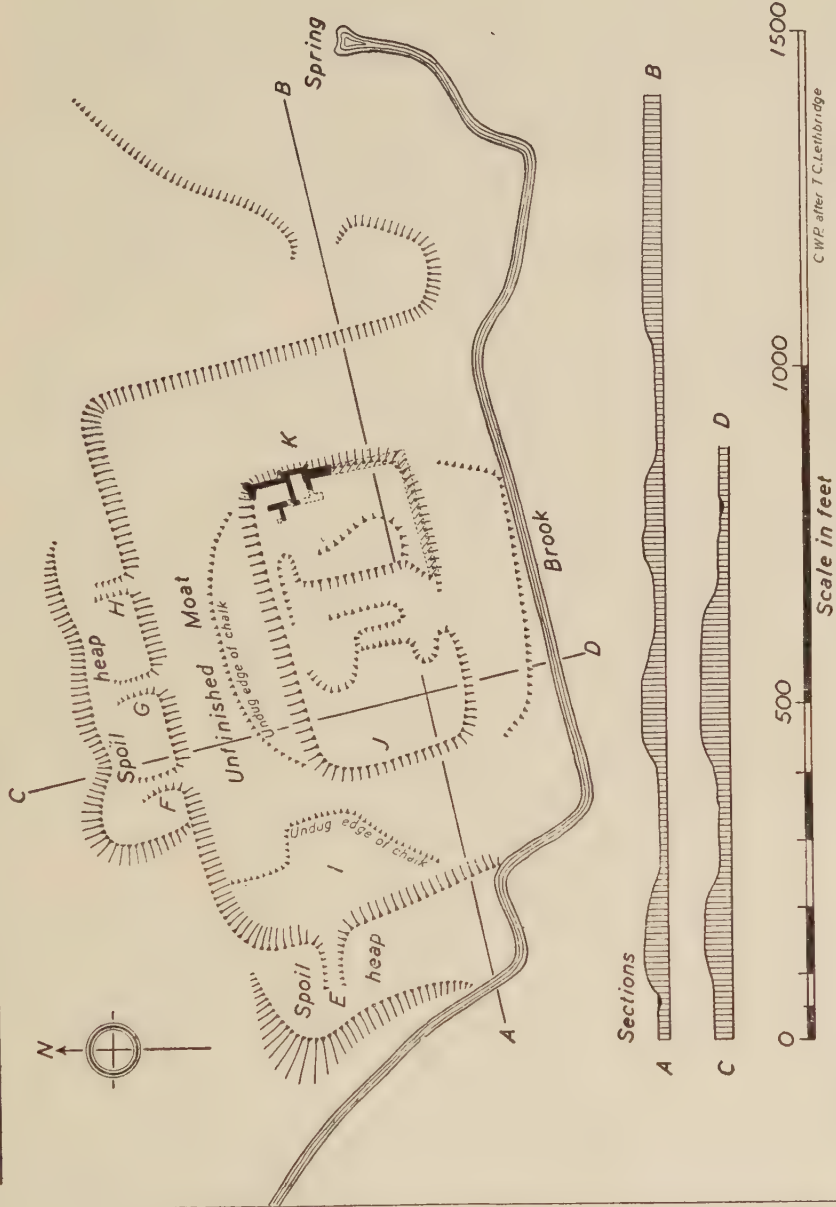
² Chronicle of Ramsey, 331.

³ Chronicle of Gervase, 128.

⁴ *Antiquaries Journal*, 1923, III, 37-48.

⁵ Proceedings of the Cambridge Antiquarian Society, 1936, XXXVI, 122-33.

BURWELL CASTLE



ANTIQUITY

death the situation which made the castle necessary disappeared and the work was abandoned. The site has so little impressed itself as that of a castle on the neighbourhood that it has never had any other name than Spring Close.

Points of minor interest are that the western end of the castle 'island' has been the site of a Romano-British building (J on PLAN) and that in 1246 a private chapel was set up somewhere on the site by the abbot of Ramsey. Excavation failed to show the exact position of the chapel, but fragments of painted glass and various architectural fragments attest its former existence.

C. W. PHILLIPS.

A ROMAN BOAT (PLATE IV)

The Romans seem to have appreciated French wine, and to have taken it to their ports by river. Monuments showing boats laden with barrels exist in Avignon museum and no doubt in many others. The example reproduced (PLATE IV) depicts the better of the two such monuments in the Landesmuseum at Trier. It will be noticed that there are twenty-two oars on the port side, and six rowers, so that obviously there must have been invisible lower tiers of oarsmen to wield them, unless the artist has sacrificed veracity to art. The coxwain is apparently giving the time by clapping his hands, and the helmsman is steering with his oar on the port instead of the usual starboard side. This may be, again, for artistic reasons, or because there was an oar on both sides, a usual device. On the bow there is the eye frequently seen on Mediterranean boats, ancient and modern, and also on the Bronze Age boat depicted on the Caergwle bowl; but the most interesting point is the animal heads at bow and stern. In front is an authentic dragon and behind is a Roman wolf.

The lower Rhine was, of course, the boundary where intercourse between the northern barbaric tribes and the Romans was most general, and the finds from the Danish bogs show what a hybrid civilization—half Roman, half barbarian—had grown up beyond the river by the third and fourth centuries A.D. The Nydam boats have no figure-heads as they remain today, but is it possible that the northern peoples may have acquired from Rome the idea of dragon heads to their boats? It must be noted that the Scandinavian boats of Bronze Age times seem to have mounted some type of figure-head and tail, while an Egyptian boat of 2500 B.C. has the end carved into a sort of snake, so that it is possible that it is no matter for diffusionist theories, but a habit natural to boat-builders.

D. P. DOBSON.

NOTES AND NEWS

ARCHAEOLOGY IN THE GOLD COAST

The building of roads and railways, mining and dredging operations, and agriculture have at various times produced as bye-products a considerable amount of archaeological material in the Gold Coast. Large unpublished collections, made by the Directors of the Geological Survey, are deposited at the Survey's offices in London and the Gold Coast. These activities have shown the existence of Stone Age cultures of both palaeolithic and neolithic facies, the latter characterized by distinctive faceted celts and apparently overlapping the local Iron Age without the intervention of copper or bronze. Some of the evidence has been published in the Annual Reports of the Geological Survey, in the *Gold Coast Review* (now unfortunately defunct), largely owing to the efforts of Capt. R. P. Wild, M.C., in the *Journal of the African Society*,¹ and in R. S. Rattray's *Ashanti* (ch. 26) and *Religion and Art in Ashanti* (ch. 27).

But a new chapter in the archaeological history of the Colony was opened in 1931 by Dr N. R. Junner, the present Director of the Geological Survey, when he found and surveyed certain ancient trench systems between Manso and Akwatia, and ancient mounds at Adukrom.

Some of the trenches enclose rising ground. They vary in depth from a few feet to 15 feet, and were originally deeper. Pottery was excavated at a depth of $9\frac{1}{2}$ feet from the present ground surface at the bottom of one of the trenches in certain cases. Other ancient trenches were found in 1931-32 and in 1935, and wheel and compass surveys made of the trenches near Manso and Abodum. One of these is 1 mile, and another, having two inner trenches, 1.3 miles in circumference. A third, north of Abodum, has a circumference of 1.4 miles, with two 'annexes' each about $\frac{1}{3}$ mile long (see FIGS. 1-3). Where deposition of silt is absent they are in places 20 feet deep with a maximum width of 29 feet at the top. Within the Abodum entrenchments 'there is abundant evidence of former occupation in the form of coarse pottery and stone implements', writes Dr Junner, and adds 'One would like to see some of these sites excavated with a view to determining their age; unfortunately the Geological Survey cannot afford time for this work. It is now believed that these trench-systems represent ancient fortified encampments similar to those found in Great Britain and elsewhere' (Annual Report of the Gold Coast Geological Survey, 1931-32).

In 1934-35 systematic excavation of some of these trenches was

¹ H. Balfour, 'Notes on a Collection of Stone Implements from Ejura, Ashanti', *J.A.S.*, 1912, XII.

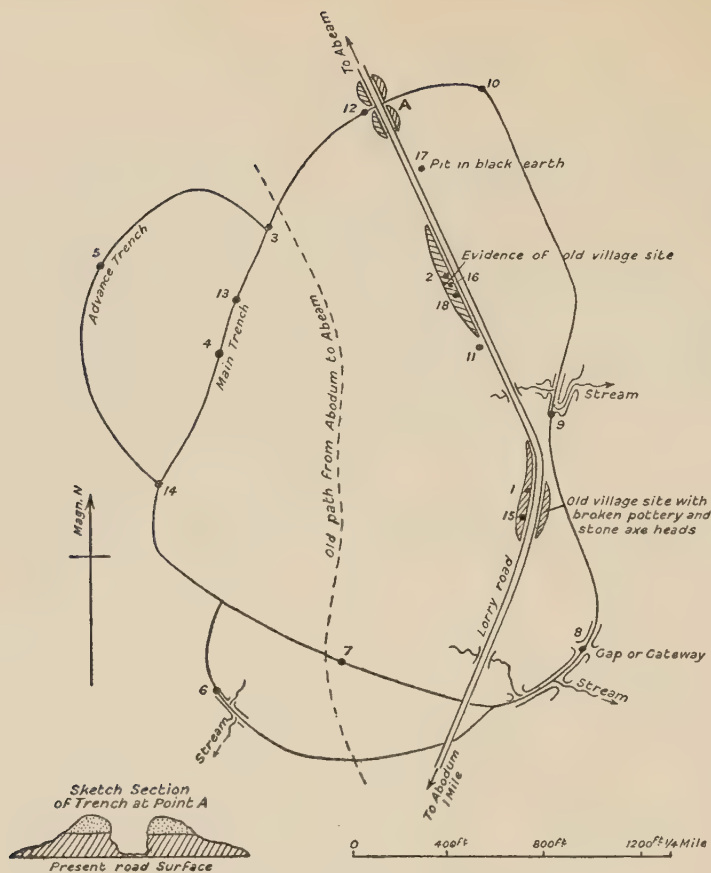


FIG. 1. ENTRENCHMENT NEAR ABODUM, GOLD COAST

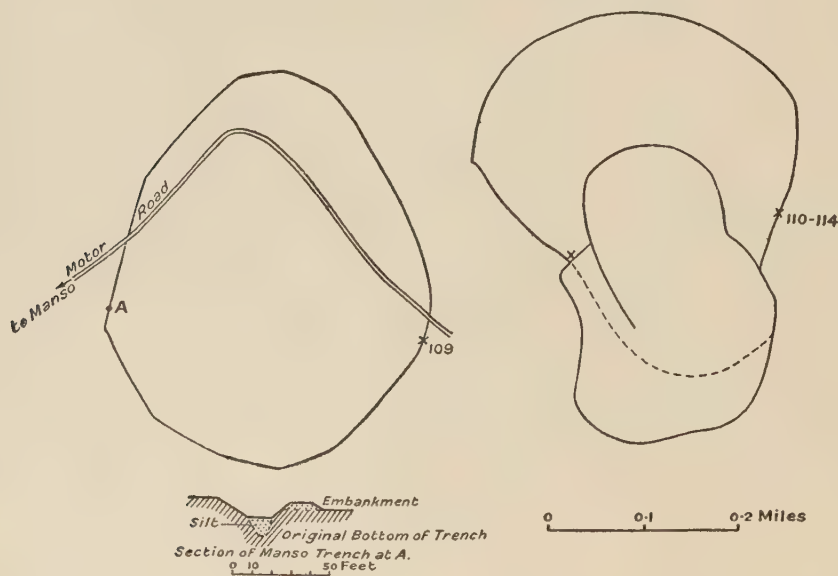


FIG. 2. TRENCH ONE MILE EAST OF MANSO, GOLD COAST

FIG. 3. TRENCHES BETWEEN TIRIPI AND ASUA BENA STREAMS, NE. OF MANSO

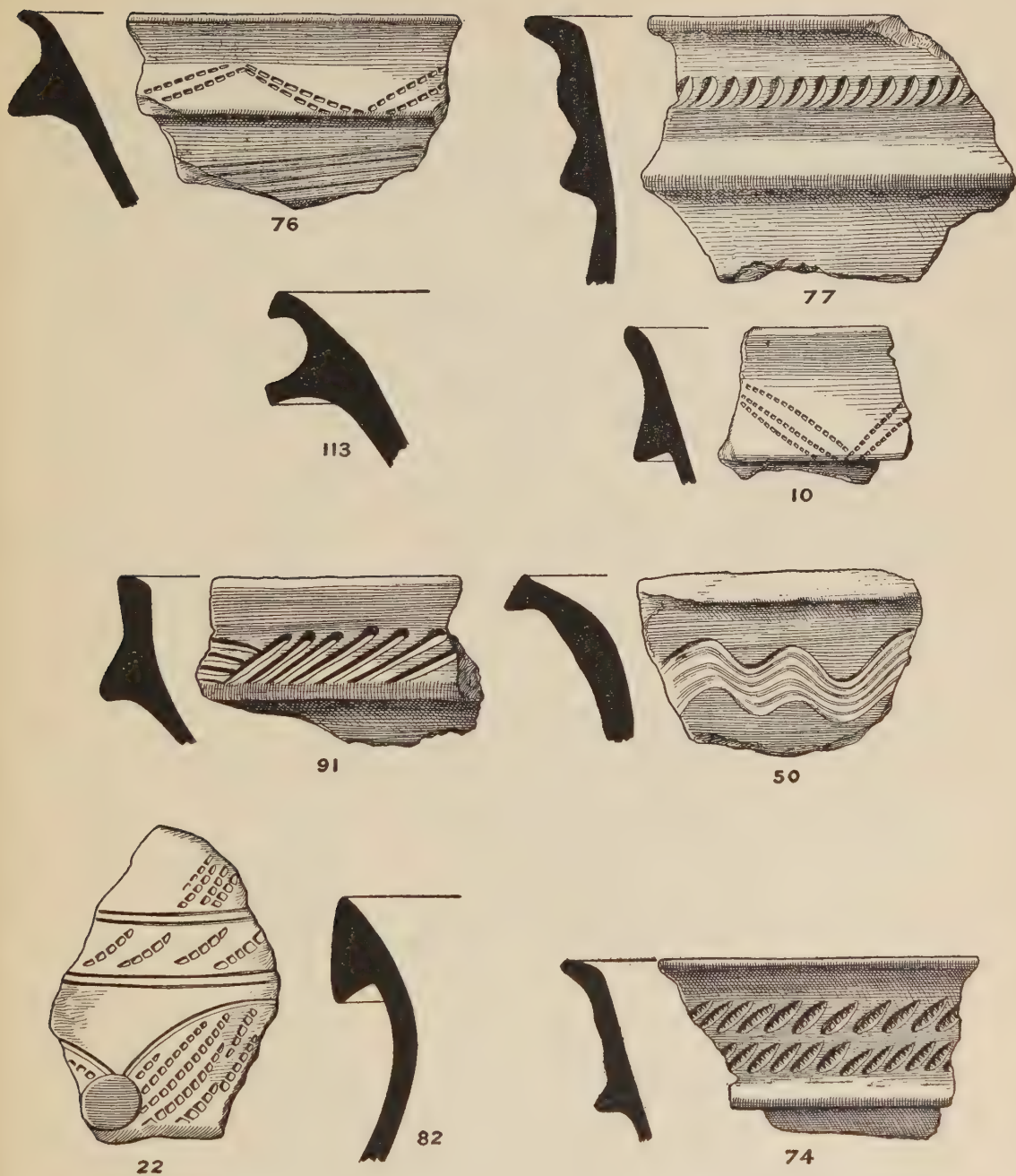


FIG. 4. POTSDHERDS FROM ABODUM, GOLD COAST. (No. 113 from Batabe). (British Museum)

ANTIQUITY

undertaken, in particular at the Abodum site, where 18 pits were sunk, as shown in FIG. 1 (Annual Report of the Gold Coast Geological Survey, 1934-35).

The drawings (FIGS. 4-5) prepared by Mr C. O. Waterhouse, illustrate a selection of the potsherds excavated at Abodum (excepting no. 113, from Batabe), all of which have been presented to the Sub-Department of Ethnography of the British Museum. (The numbers are those of the Museum Register, under the serial number 1935. 12-11).

Dr Junner writes ' all the material was collected from red clay, silt and black earth. The last named occurs on the site of old settlements enclosed by the trenches, and yielded more pottery fragments than the silt and clay, which have been washed into the trenches since they were formed. The trenches vary greatly in their state of preservation. Some are almost completely silted up and contain old trees in them ; others are practically free from old trees and are well preserved '.

Although the material was removed in 1-foot layers no stratification of deposits was observed. The quantity of the material and the variety of the ornamentation, however, suggest a prolonged period of occupation.

No complete pot was recovered, nor even enough sherds from any one pot to permit of its reconstruction. But the curvature of the rims suggests that much of the ware consisted of wide-mouthed cooking dishes, with a diameter of about 9 inches at the mouth. All the pottery appears to be hand-made, from clay of varying texture, the coarsest containing large pieces of quartz grit and some staurolite. It is generally well and evenly fired. Ornament is impressed or stamped (nos. 10, 22, 43, 56, 74, 76), incised (22, 35, 91), or ' combed ' (50), with occasional ornamental modelling of rims and flanges (67) and applied details such as bosses (22, 68). Roulette-marking and painting are absent, and no handles, pedestals or lids were found.

Perhaps the most distinctive feature of the pottery is the frequent occurrence of prominent flanges at or below the rim (76, 77, 113). Some of the lips are much undercut, forming a kind of collar (10, 82).

The different styles do not fall into any well-defined groups corresponding to excavation levels ; but certain types are commoner at the lower levels (*e.g.*, the ' combed ' ware), while others—in particular a fine quality bronze-hued ware containing particles of mica—predominate at the top. Some disturbance of the deposits is indicated by the finding of two fragments of one pot at different levels.

Two polished stone celts were found with the top level sherds in pits 10 and 16, while a fragment of a tuyère encrusted with iron slag

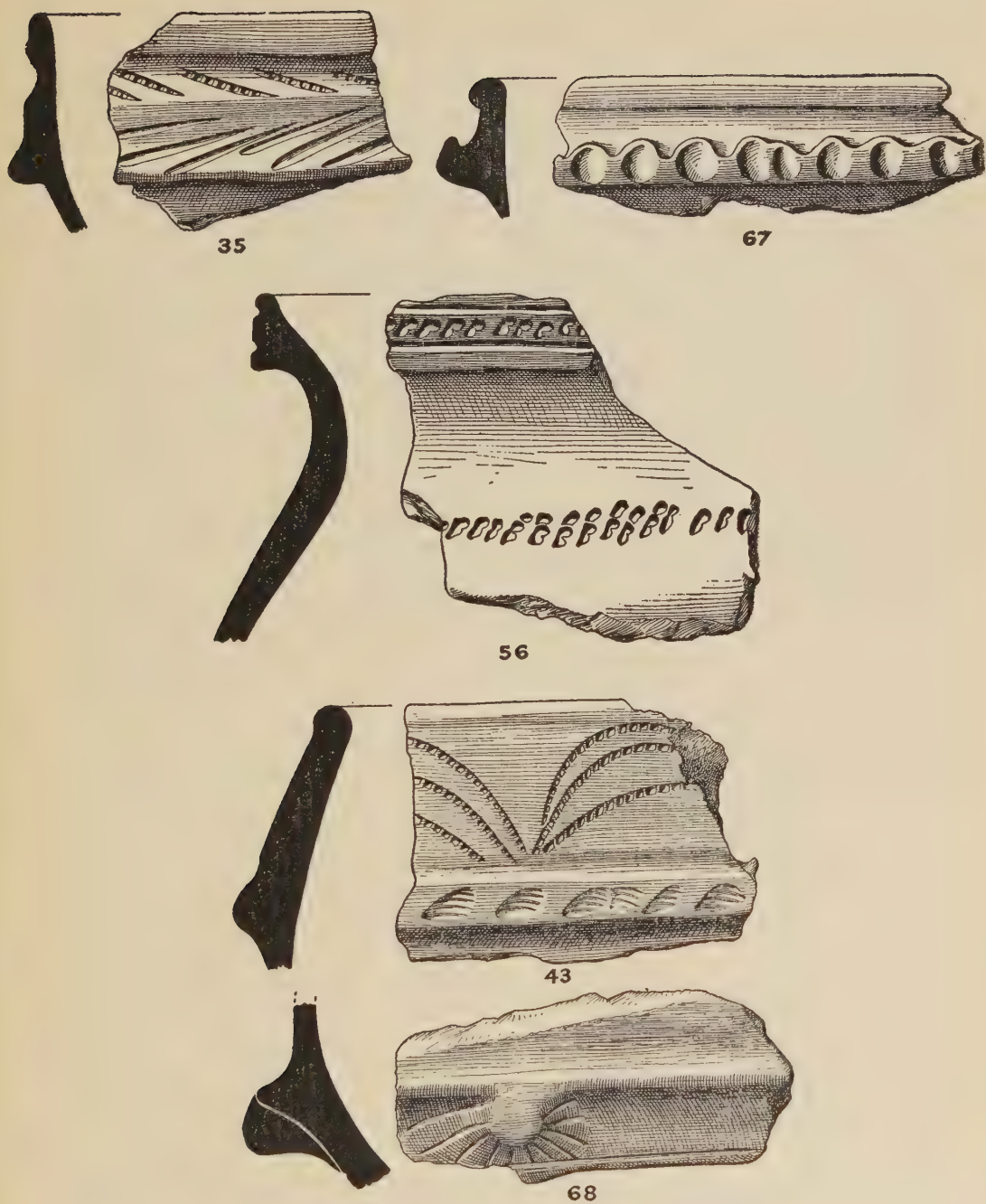


FIG. 5. POTSDHERDS FROM ABODUM, GOLD COAST. (British Museum)

ANTIQUITY

underlay one of the celts. Unless this is due to disturbance, one must infer that stone celts continued in use after iron smelting had begun—an inference which is confirmed by similar associated finds at other Gold Coast sites, as noted by both Rattray and Wild.²

If the excavations may be taken as a fair sampling of the site the negative evidence is significant. The complete absence of any European trade objects, such as beads, suggests an antiquity of at least three or four centuries. The local inhabitants disclaim any knowledge of the origin or purpose of the trenches, and state that they existed before their ancestors came to the country (three or four centuries ago). The pottery is quite distinct in form and ornament from modern Ashanti ware. The weathered condition of many of the sherds, and the silting up of trenches also suggest some age. Everything in fact points to the sites having been deserted by the 16th century, if not earlier, and the accumulation of material suggests a lengthy period of occupation previous to this.

It is much to be hoped that further systematic excavation will soon be undertaken in the Gold Coast. It is clear that there is here a large, interesting and almost untouched field awaiting the spade of the trained archaeologist. Aerial photography might prove a valuable help, not only in bringing out details of known sites invisible on the ground, but also in revealing new and unsuspected sites. Even where these are overgrown the character of the vegetation might be expected to betray them, as has been so successfully demonstrated in Great Britain.

LIST OF POTSDHERDS ILLUSTRATED (all from Abodum, except 113, from Batabe)

Number	Pit	Depth
10, Grey, micaceous	4	3-4 ft.
22, Terracotta	8	3-4 ft.
35, "	13	5-6 ft.
43, "	13	4-5 ft.
50, "	16	1-2 ft.
56, "	16	2-3 ft.
67, "	16	4-5 ft.
68, "	16	4-5 ft.
74, Dark grey	16	2-3 ft.
76, 'Bronze' micaceous.	Near 16	1-2 ft.
77, "	Near 16	1-2 ft.
82, Grey, undecorated.	Near 16	2-3 ft.
91, 'Bronze' micaceous.	18	2-3 ft.
113, Grey, undecorated.	Batabe	3 ft.

H. J. BRAUNHOLTZ.

² cf. R. S. Rattray, *Ashanti*, ch. 26, and R. P. Wild, *The Gold Coast Review*, 1927, III, no. 2, 'Stone Artifacts of the Gold Coast and Ashanti', p. 174.

NOTES AND NEWS

PROTECTION AGAINST DEMONS (PLATE V)

Professor HANS HELFRITZ writes with reference to the custom of fixing horns to buildings, in Mohammedan countries, to drive away demons.

'I have made several journeys in South Arabia, and was also struck with this custom. The two photos which I enclose come from the country between Hadramaut and Yemen. One is from Shabwah, the old Sabota; the other from the Bedouin village of Mafut in Wadi Irma, near Shabwah, which is inhabited by Bedouins of the tribe of al Bureik. I visited these places last Spring. The horns of the ibex were seen on a little mosque in Shabwah and on Bedouin graves, Mafut. Ibex horns fixed to the corners of houses were also found near Dar el Qoz in West Hadramaut on the road from Terim to Qabr Hud. Here this custom has a religious origin, possibly handed down from Sabaean times. The ibex was the sacred animal of a deity and therefore its symbol; its relief is often seen on old Sabaean altars. Most likely it was the sign of the Babylonian moon god Sin, whose culture also penetrated into South Arabia. The Bedouins today use the horns for defence against evil spirits'.

BASSIANAE, YUGOSLAVIA (PLATE VI)

During Roman times, the Yugoslav portion of the Danube Basin contained many important towns. Travelling from west to east, there were Mursa (Osijek), Cibalae (Vinkovci), Sirmium (Sremska Mitrovica), Singidunum (Belgrade), Viminacium (Kostalac) and a whole series of smaller and less-known places. The reason for this exceptional number of cities was undoubtedly the natural wealth and position of the district, on the boundaries of the three provinces of Pannonia, Moesia and Dalmatia. It was through this district that the main road from Italy *via* Aquileja ran, and here it divided into the main routes to Dacia and southward to Thrace and Macedonia and thence into Greece and Asia Minor. Some of these towns were provincial capitals, such as Sirmium, the chief city of Pannonia inferior, and Viminacium for Moesia superior. Many of them played a very important rôle in the defence of the Empire from the attacks of the northern barbarians who were frequently concentrated on this area. On the main road linking Sirmium with Singidunum lay Bassianae. According to the Geography of Ptolemy, the Peutinger Table and half a dozen other classical sources, this site has been identified with the ruins known as Gradina near Donji (Lower) Petrovci in the district of Srem between Belgrade and

ANTIQUITY

Sremska Mitrovica. This fact has been further confirmed by the discovery of various stone monuments near Gradina inscribed with the name of Bassianae, as well as by the evidence of several later travellers who describe Gradina near Petrovac under this name. The identification is thus founded both on history and tradition.

Bassianae, the present Gradina, lies immediately to the north of the village of Petrovci and is identifiable by a marked rise. Its superficial shape is that of an irregular pentagon. It is defended on the south by the canal of Jarčina, of which the section leading from the village is Roman in origin. On the west is the little stream of the Rečica which flows into the Jarčina immediately below the south-western wall of the city and also served as a means of defence. The eastern and northern walls seem to have been defended by a trench. Looked at from the plain the site of Gradina is higher on the western face, whereas the eastern face slopes gently away into the plain. It seems that here were the extra-mural suburbs, only a little raised above the plain. Various indications seem to prove that the Bassianae cemetery is located under the present village. The Gradina pentagon measures from south to north about 550 metres and from east to west something over 350 metres. At the edges of the meadow and scattered over its entire area are holes, which are probably connected in some way with the building plan. Only towards the north-eastern corner, at the village graveyard, has this impression of an old ruined site been destroyed.

The first excavations at Bassianae were carried out as far back as 1882 by the archaeologist S. Ljubić. But, owing to the inefficient methods of excavation at that time and the almost total destruction of the site, he discovered practically nothing of the buildings. Finally, disillusioned, he abandoned the site. He stated that the ruins of Roman buildings near the village of Dobrinč were those of Bassianae, these being far more evident to the naked eye, and looked on Gradina as a sort of temporary Roman camp erected before Sirmium and badly built owing to the short time it was inhabited. The only important statement made by him concerning his work was that the holes on the surface were the foundations of buildings. But he was only able to do this to a very limited extent as they are not always visible on the ground and there were at that time no air-photographs. He was then following the local village tradition, according to which the holes on the surface at Gradina served for the excavation and collection of building material, stones and brick which are rarely to be found in the plain of Srem.

The renewal of the excavations at Bassianae is due to the initiative

NOTES AND NEWS

of Professor St. Stanojević, President of the Historical Society of Novi Sad, a fine national historian whose interest is not limited only to archives but extends also to archaeological discovery. Despite Ljubić's scepticism he was convinced that Gradina was the site of Bassianae. The work was organized in the most up-to-date manner. The ground was photographed from the air. All that the human eye was unable to grasp in its entirety was now revealed by the air-photos. The excavated holes show on the photograph (PLATE VI) as dark marks. The excavation of the town walls revealed an accurate plan of the foundations, and the gates, streets, public buildings, churches and small private buildings were indicated. In 1935 the excavations were based upon the information given by means of the air-photographs, and Ljubić's scepticism proved wrong. Petrovačka Gradina was certainly Bassianae. The extent of the discoveries confirmed this. It is true that the site has the general appearance of a camp but this was undoubtedly due to the disturbed state of the country in late classical times, when Bassianae filled an important military rôle and received its final and definite form. Besides that the size of the place precludes any possibility of its having been merely a camp. This unique view of Bassianae, and the possibility of reconstructing the site by the help of air-photographs, were undoubtedly due to the fact that the area in question is pasture land so that there was no ploughing over the surface, which would certainly have destroyed the evidence seen.

MIODRAG GRBIĆ, Conservator,
Museum of Prince Paul, Belgrade.

CATERN'S GRAVE, NEAR BASINGSTOKE (PLATE VII)

The accompanying air-photograph, taken in the ordinary course of practice by the R.A.F. (and reproduced by permission of the Controller, H.M. Stationery Office, and the Director General, Ordnance Survey), reveals three important new sites.

(1) Remains of a double square, recalling that published already (ANTIQUITY, 1933, VII, p. 296, PLATE II) near Womenswold, Kent.

(2) A group of enclosures, mostly rectangular, with a pair of lines leading to the Roman road, on the right hand margin of the photograph.

(3) A group of dark splotches, possibly representing habitations or pits.

These lie beside the Roman road between Winchester and Silchester at the point where it is crossed by the Basingstoke-Kingsclere-Newbury road. The actual cross-roads is seen on the photograph

ANTIQUITY

close to the double rectangle. The site has always been well-known as a promising one, although up to the present nothing definite has been discovered there. On Ogilby's map of 1672 the cross-roads is called Catern's Grave. On Colt Hoare's map 'Ancient Wilts', Roman Æra, vol. II, 1819, plate opposite p. 64, a semi-circular bank is marked on Rooks Down, but field-work has failed to locate any trace of this and the whole area has been under intensive cultivation for some time, though it is now under grass. It is recorded in the *Gentleman's Magazine* for 1831, part I, 351, and *Gent. Mag. Lib.: Archaeology*, II, 177, that several skeletons were found on Rooks Down while making the new road, and in the same account the adjacent camp at Winklebury, which falls just outside the photograph, is also referred to under the name Bury Bank or Winklow's Barrow.

It is hardly necessary to describe the remains visible on the photograph in any detail. They appear to be those of a farm, but of what period is quite uncertain. Excavation would no doubt determine this, and we hope that the publication of this photograph, which will be seen in the Basingstoke Museum, may lead to some such work being undertaken.

O.G.S.C.

AN ESSAY ON EGYPT

A prize of £50 is offered for an essay in English on some archaeological or ethnographical (not mainly linguistic or literary) subject connected with Prehistoric or Pharaonic Egypt.

The essay should show original research. The words 'archaeological' and 'ethnographical' are to be interpreted in the widest sense. The subject may be selected by the candidate, and the essay should be illustrated by as much comparative matter as possible from other lands, whether ancient or modern. The utmost use should be made of photographs and drawings.

The prize will be awarded only if the work is of sufficiently high standard to warrant it.

The candidate may be of either sex and any age. Essays (*with a title, but no signature*) must be typed and sent, with *signed* letter, before 31 December, 1937, to Mr J. H. Hay, Solicitor, 29 Bedford Square, London, W.C. 1, who will give each essay a number and forward it to the adjudicators. Other correspondence should be addressed to Mr G. A. Wainwright, 26 Elm Park Gardens, London, S.W. 10.

Mr K. de B. Codrington, Dr Margaret A. Murray, and Mr G. A. Wainwright have kindly consented to act as adjudicators.

Varia

The Editor is not always able to verify information taken from the daily press and other sources and cannot therefore assume responsibility for it.

It is not generally known that the first recorded opening of a Long Barrow was carried out by St. Patrick. The passage in his *Life** is as follows, translated :—‘ Once, as Patrick was travelling in the plains of the son of Erc (immaigib maicc Ercae), namely in Dichuil and Erchuil, he beheld therein a huge grave, to wit, a hundred and twenty feet in length. The brethren asking *ut suscitaretur*, Patrick then brought to life the dead man who was biding in the grave, and asked tidings of him, namely, when and how [he got there], and of what race and of what name he was. He answered Patrick, saying : “ I am Cass, the son of Glass ; and I was the swineherd of Lugar, King of Imata, and Macc Con’s soldiery slew me in the reign of Coirpre Niafer. A hundred years have I been here today ”. Patrick baptized him, and he went again into his grave ’.



In connexion with the paper on Reculver by Mr R. F. Jessup in the June (pp. 179-94) number of *ANTIQUITY*, we are pleased to learn that the Herne Bay Urban District Council has included amongst the lands to be acquired under a proposed Compulsory Purchase Order all the portions of the Roman fort, together with the site of the ditch, which are not as yet in the hands of the Crown. After acquisition the Council proposes to hand over this property to the Commissioners of His Majesty’s Office of Works for maintenance as an Ancient Monument.



The rarity of tombs of the Old Stone Age is known, and the discovery which M. R. Blanchard has just made is therefore all the more welcome. The tomb of the round-headed young woman brought to light at

* *The Tripartite Life of St. Patrick*, Rolls Edition, part I, 1887, p. 123.

ANTIQUITY

Saint-Germain-la-Rivière (Gironde) was formed of great slabs of stones placed around and above the skeleton, which lay on its left side in a contracted position. In the earth, which was strongly impregnated with ochre, M. Blanchard recovered a fine collection of grave-goods—bone and stone implements, a necklace of perforated and engraved teeth, and the remains of a belt ornamented with shells. More remarkable still are the offerings which accompanied the remains of the young person and which give to the Magdalenian tomb of St. Germain a quite special character. All round the skeleton there had been systematically arranged reindeer horns, skulls and jaws of horses, and slaughtered bisons, as if some ritual ceremony had been performed there. (*Rev. Arch.* 6 Ser. VI, Oct.-Dec. 1935, 171-2).



In the course of excavations at Arlon 15 Belgo-Roman tombs of the fourth century have been unearthed, five of them intact and fully furnished. (*The Times*, 19 September).



A new fossil anthropoid skull has been found in a cave at Sterkfontein near Krugersdorp, Transvaal. The discovery was made by Mr G. W. Barlow, Manager of the Lime-works, who communicated it to Dr Broom. It is fragmentary but there are sufficient remains to enable certain facts to be stated. In some respects it resembles the Taungs skull, though it is regarded as 'most probably Upper Pleistocene' in date, whereas Taungs is Middle or Lower Pleistocene. Dr Broom concludes:—'This discovery shows that we had in South Africa during Pleistocene times large non-forest living anthropoids—not very closely allied to either the chimpanzee or the gorilla but showing distinct relationships to the Miocene and especially to the Pliocene species of *Dryopithecus*. They also show a number of typical human characters not met with in any of the living anthropoids'. (*Nature and Illus. Lond. News*, 19 September).



In June 1935 a fossilized human occipital bone was found *in situ* at a depth of 24 feet below the surface, in the middle gravels of the Thames 100-ft. terrace at Swanscombe, Kent, in association with

NOTES AND NEWS

implements of the Acheulean culture-phase. In March 1936, at the same depth, and in the same seam of gravel, the left parietal bone of the same skull was discovered, and this was witnessed and photographed while still embedded in the gravels, by an independent observer. Both bones are in a remarkable state of preservation. It is claimed that 'the differences between the actual anatomical features [of this and the Piltdown skull] overwhelmingly favours the view that the geological horizon of Piltdown should be considered as later than that of the Swanscombe horizon in the middle gravels of the 100-ft. terrace' (Alvan T. Marston, the discoverer, in *Nature*, 1 August, pp. 200-1). The same discovery is also discussed by the same writer in the *British Dental Journal*, 15 August 1936, where it is claimed that 'the Piltdown canine tooth as well as the Piltdown jaw-fragment should be dissociated from the Piltdown human remains, and relegated to the section of fossil apes'.



The upper part of a human skull 'said to date back to the last phase of the glacial period' has been found near the Moscow-Volga canal, on the banks of the Skhodnaga river. It was found at a depth of 12 feet in an alluvial deposit of quaternary age. It is described as having protruding brow-ridges and a very low forehead, thus resembling skulls of the Neanderthal type. (*Evening Standard*, 18 August).



The Cumberland and Westmorland Antiquarian and Archaeological Society is to excavate a remarkable circular earthwork called King Arthur's Round Table. (*Cumberland and Westmorland Herald*, 19 September). It is situated near Eamont Bridge, Penrith; its nearest analogue is Gorsey Bigbury on the Mendips, which excavations by the Bristol University Spelaeological Society have shown to belong to the Beaker Period (Early Bronze Age). The Cumberland Society has recently honoured the founder of *ANTIQUITY* by electing him an Honorary Member.



Portions of a round-bottomed neolithic bowl have been found on a new road near Haddon Hill, Holdenhurst, near Bournemouth. One is tempted to ask whether this is merely a chance find—or rather a

ANTIQUITY

chance loss, originally—or whether it indicates the settlement-site of the people who made the Long Barrow not far away, which was excavated last winter? (*Bournemouth Daily Echo*, 23 September).



Professor Henri Frankfort, Field Director of the Iraq Expedition of the University of Chicago's Oriental Institute, has reported on the last season's (1935-6) work of that expedition. At Tell Agrab Mr Seton Lloyd has unearthed two fragments of a cylindrical vase of green steatite. On one of these there is represented a figure 'seated before a building with a curious roof, carried on arches or forked poles, enclosing a large humped bull in front of a manger'. The humped bull was not indigenous in Mesopotamia, nor is any scene of animal-worship known from there. 'On the seal-stones from the Indus valley it is the most common motive of all, and the animal is generally a humped bull in front of a manger'. This rendering of an Indian cult in a Mesopotamian setting speaks of more than mere intermittent trade intercourse. It is suggested that there was a 'cultural continuum', that is, a belt of permanently inhabited country, extending from Mesopotamia to the borders of India; and the existence of such a belt has, in fact, been proved by Sir Aurel Stein's discoveries. (*The Times*, 1 August).



The intervening region is now too arid to support the large population suggested by the finds there, and we have been waiting for someone to call attention to the far-reaching implications of Sir Aurel Stein's discoveries. Thus yet once again is demonstrated the paramount necessity of reconstructing the natural environment of prehistoric man, whether the decisive factor be rainfall (as here) or soil plus vegetation (as in this country).



More than 20 years ago the writer pointed out that the existence of an ice-sheet in Northern Europe implied a climate in the Sahara that would have made it a hunter's paradise. In the Old Stone Age it *must*, therefore, have been admirably adapted to the needs of the men of those times. Time has proved the correctness of that view. When it was first put forward, remains of men of the Old Stone Age were almost unknown in the Sahara; now (as we hope to show our

NOTES AND NEWS

readers shortly) they are found to be abundant there. The Sahara may then have been, relatively, the most densely inhabited region in the world.



Alabaster ornaments, fragments of frescoes, and coins dating from the second and third centuries have been discovered during excavations in the city of Termez, in Uzbekistan, by an archaeological expedition sent out by the Hermitage of Leningrad and the Uzbek Committee for the Preservation of Ancient Monuments. One of the halls of a twelfth-century palace was completely excavated. (*The Times*, 17 August).



Interesting discoveries during excavation on the Megalithic site of Burzahom, near Srinagar in Kashmir, are described in the *Miscellanea* of the American Philosophical Society. Numerous polished stone implements and examples of 'black burnished' ceramic ware were found at a depth of 11 ft. from ground level below a brick kitchen floor containing clay hearths. The pottery is similar to the 'band ceramic' of Central Europe and regarded as being late Neolithic of approximately 3500-4000 B.C. It is significant that this 'black burnished' pottery is identical with the black ware found in Mohenjodaro and not dissimilar to the black ware found mixed with the painted pottery of the earlier Chalcolithic periods of Baluchistan and Persia. (*Discovery*, September 1936).



A magnificent hoard of silver and other objects, dated at about 1936 B.C., has been found at Toud (the ancient Tupnium) on the east bank of the Nile, about 20 miles south of Luxor. They were found in four bronze chests during the excavations of the Institut français d'Archéologie Orientale, directed by Monsieur P. Jouguet. It is claimed that they are of Asiatic origin, and the discovery of cylinders with cuneiform writing certainly corroborates this claim. (*Illus. London News*, 18 April, pp. 682-3).



In the time of Queen Elizabeth, the civilization of Europe could boast of little that was much beyond the material achievements of the old civilizations of the Near East (Dr H. S. Harrison, Horniman Museum, in *Nature*, 1 August 1936, p. 189).

ANTIQUITY

The (Roman) Jewry Wall, Leicester. 'Leicester cannot afford to waste money for such an object as keeping these miserable remains. Let us see a beautiful building, which will bring credit and a profit to our city. CITIZEN'. (*Leicester Evening Mail*, 8 August, 1936).



'What a find it is for Leicester. It would be a thousand pities if this ancient spot were not preserved as it will undoubtedly be one of the sights of Leicester in the days to come. I hope that the Voice of Leicester will make itself heard for the preservation of the site. VIGILANT. (*Leicester Daily Mercury*, 1 August 1936).



The French Academy consists of 40 members, known as 'The Immortals' because they seem never to die, and for the same reason perhaps members of the executive are called 'Secrétaires perpétuels'. All are obliged to possess that institution's green full-dress uniform and sword. The uniform costs about £60 and the sword, which is of course quite harmless, about £150. It has been suggested that the State might well provide Academicians with their swords; but the question arises, are they really necessary? Would it not be more in keeping with the times to provide them with a rifle or a really efficient gas-mask, and to replace the expensive uniform by dungarees? (*Sunday Times*, 8 March 1936).



Men of action have always been more susceptible to the wiles of the wild men than are mere thinkers; and dictators seem particularly gullible. The ruler of Turkey appears to have been caught by some strange swindle called the 'Sun-Language theory' according to which every word in every language may be reduced to a formula based on the sounds used by primitive man, when he began to express his feelings in speech. It has never been revealed who was the originator of the theory, but it is clear that Kamal Atatürk has adopted it, and a number of the most learned scholars in Turkey have been at pains to master and expound its details'. (*The Times*, 9 September).



It is hardly necessary to point out that science knows nothing whatsoever of these 'sounds used by primitive man', and consequently that the whole of the theory must be a tissue of speculation.

NOTES AND NEWS

Yaffle, who is always entertaining, is 'at work on a series of historic films, which show our island story as it ought to be'. The first one will deal with the Romans in Britain and will be called 'Boadicea', with the sub-title 'Queen Who Sacrificed A Kingdom For Love'. Yaffle has a theory that the Romans never conquered Britain at all, but that 'they were invited over here because they were good at building and road-making on condition that as soon as they had carried out a certain number of public works, back they went. And back they did go as every school-boy knows . . . Historians are always telling us what buildings and roads the Romans made, but what they don't tell us is that, although the Romans did the work, there was always a British foreman'. (*Reynolds News*, 13 September). Personally I should imagine that, to judge by modern analogies, the British and the native auxiliaries did all the donkey-work as far as the roads were concerned.



Something rather like this did actually occur later on when Benedict Biscop (628 ?-690), who, is described as a 'Noble Englishman', obtained from Gaul stone-masons (*cementarii*) and glass-makers, trained in the Roman tradition, to help in building the monastery of Wearmouth in 674.



Professor C. van Riet Lowe, the writer of the account of the excavations at Mapungubwe in the September number of *ANTIQUITY*, should have been described as of the University of the Witwatersrand, where he is Professor of Archaeology.

Archaeological Photography

The remarks in the September number of *ANTIQUITY* (pp. 351-2) on photographing archaeological subjects seem to have been much read to judge from the number of letters received, and we print some of the comments.

Dom ETHELBERT HORNE writes :—

‘ I am interested in your note on “ Archaeological Photography ”. I wonder if I may venture to describe a plan of mine for photographing down on the ground, without the distortion which is the usual consequence ?

‘ When I was excavating the Anglo-Saxon cemetery at Camerton near Bath, at first I photographed the skeletons with a tripod camera, from one end of the grave. This produced the distortion you will see shown on PLATE I, A. I then made a pair of ash tripods, 6 feet high. The head in which the legs met, had an iron pin 3 inches high, standing up in it. I placed one of these tripods on either side of a grave, and a wooden bar, 6 feet long, with a hole in each end of it, dropped on the two iron pins at the top of the tripods. The camera was fastened to a carrier that ran on this cross-bar.

‘ By using a plumb-line from the lens to the skeleton, the camera can be placed in the right position, and by measuring the distance between the lens and the skeleton with a tape, the correct focus can be obtained.

‘ The advantage of this vertical method can be seen in the illustration (PLATE I, B).

‘ When the sun shines directly into a grave I have often found that some part of it was in such deep shadow that a photograph was impossible. A large piece of thin canvas, held by a couple of helpers, can be so placed as to cut off direct sunlight, and produce a nice diffused light down in the hole ’.

Mr L. FULLBROOK-LEGGATT writes :—

‘ With regard to the two photographs used to illustrate the difference of results with the sun in and out, I am doubtful whether the comparison made is fair. In the first instance, it is obvious that the two pictures were taken with different apertures from different angles—the latter slight, it is true, but sufficient to affect the results

NOTES AND NEWS

materially. In the second, the degree of excellence of result, whether in sun or shade, depends on the film used, and the type of film used depends, to a great extent, on the speed and lenses of particular cameras. I have a camera somewhat similar to the Editor's. Mine takes up to $1/300$ second, and, after using panatomic film for a time, I have since found that hyper-sensitive is much faster and gives equally good detail. It enables me to do both outdoor and indoor work in good or poor natural light, to take in artificial light or in actual darkness. Furthermore, being a very fine grain, it enables one to make a very big degree of enlargement if necessary.

'Whenever possible, I take with a full aperture, and, however fast the speed at which I am taking, I prefer to use a stand. Even when taking at $1/100$ second without one, there can be slight movement which will detract from true sharpness of outline and detail. A lens hood is also very desirable inasmuch as it concentrates on the lens the essential light rays and shuts out those lateral rays which tend to spoil a true image.

'The Editor very rightly points out that one of the most important essentials of a good photograph is the light, but he does not give the best means of gauging this—an exposure meter. There are a number of types of these, some of which require a certain amount of calculation to be done. From personal experience, I favour the moving coil type, for with this one has only to know the speed of the film one is using, and look up the appropriate scale on the meter, to obtain the correct reading for aperture and exposure. It is only by the use of such a meter that one realizes how light varies from minute to minute even on the finest day. They are not cheap to buy, but expenditure on them is a very sound economy since, if they are properly used, any failure can, generally speaking, be the result of carelessness or lack of understanding only.

'I am not sure whether the Editor intends to imply that a camera of the reflex type he uses is adequate for the requirements of Archaeological Photography. Granted that its range is wide and can be made wider by the use of magnifying lenses for 'close-up' objects, I consider that a camera with a wide angle lens is also needed, and, possibly, a panorama camera.

'I would make two final suggestions. Under-exposure is fatal. Over-exposure with modern films allows a considerable margin of safety. Examine negatives under a magnifying glass to decide whether they merit enlargement'.

ANTIQUITY

Dr GRAHAME CLARK writes :—

‘ I have just read your hints on photography with much profit and interest. There is one sentence on which I might be allowed to comment. “ It is . . . no good abusing the stone if it gives you nothing on a rainy day, you must go again ”. I have found that where there is a very worn engraving (this would apply to an inscription as well I imagine) a rain-washed surface with the water still glistening can give much the same effect as a light applied obliquely in the dark, but it has the advantage of not being “ hard ”. The proof is in the photograph (PLATE II) which I send—the engraving was so difficult to see that we could not chalk it by daylight, yet on a rainy day it was clear looked at a little obliquely. The difficulty of the dullness of the day was partly offset by the glistening of the wet stone and partly by making a longish exposure. I am informed that the Bronze Age rock-engravings of Scotland are well-known to show up better under similar conditions ’.

We mentioned the above to Dr Horne, in replying to his comments (page 486), and he added :—

‘ What you say about rain and a wet surface, is interesting. In photographing a section in a cutting, on looking carefully at the face, of course you see all the different fillings or *strata*. Often they are so alike in tone that they photograph badly, and it is only in a drawing that the real state of things can be expressed.

‘ If however the face is syringed with a fine greenhouse syringe, the layers absorb the water differently and they frequently become plain enough to make a good photo. A syringe and a bucket of water are quite useful adjuncts to out-door photography. It is needless to say that the syringe should be one with very fine holes, and it must be used gently ’.

Miss M. C. FAIR writes :—

‘ There is one point about Reflex cameras which I find somewhat awkward for certain subjects and that is the waist-line view point. I use my direct vision finder quite a lot when there are obstructions in foreground which want toning down, such as for instance fences, or tombstones when taking church exteriors. Many of the cameras now sold have direct vision finders of bad type with no proper centring fitting, which means you may get what you want on plate or film or you

PLATE I

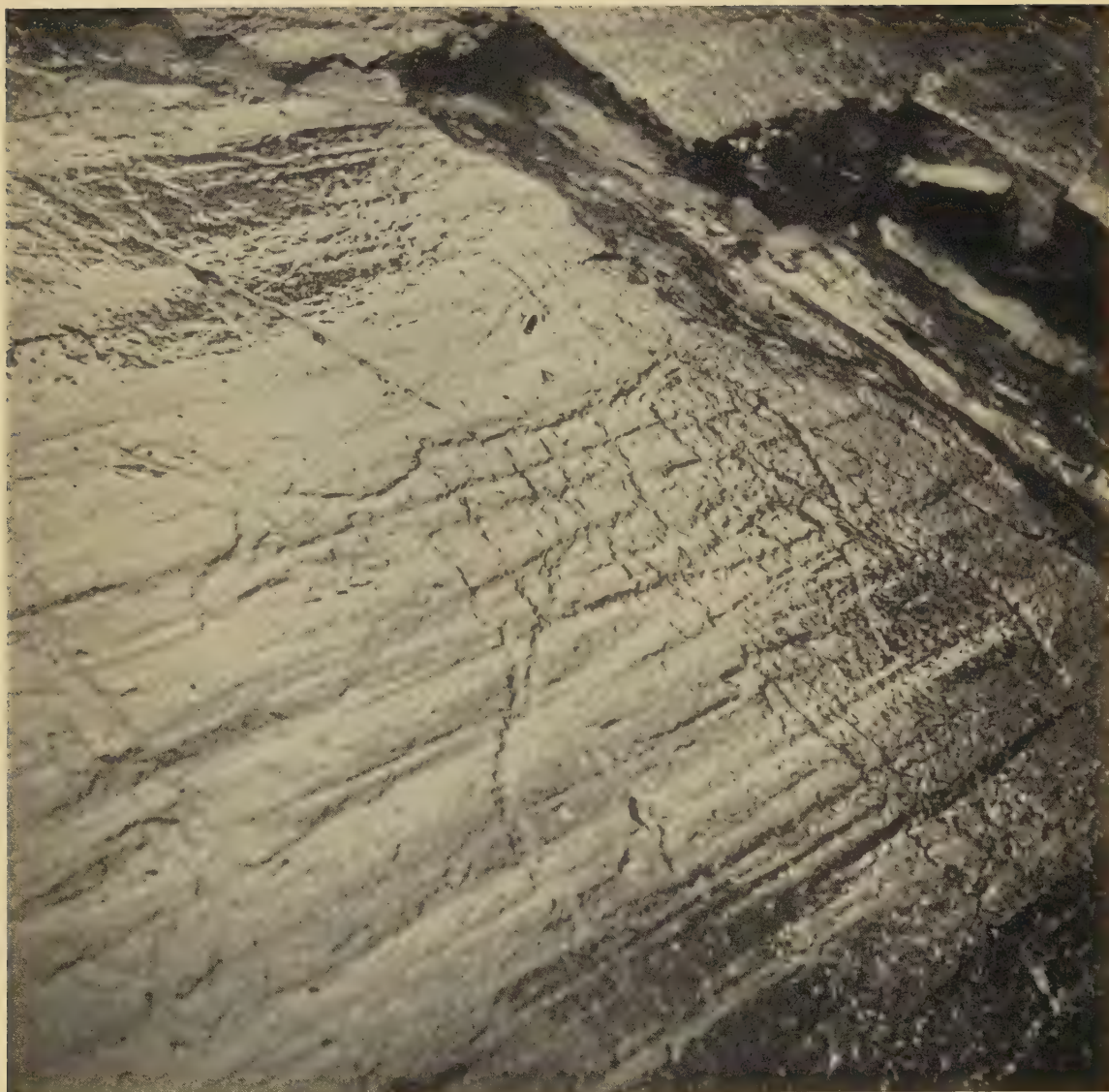


SAXON BURIAL, CAMERTON, SOMERSET
A. SKELETON PHOTOGRAPHED FROM FOOT OF GRAVE
(See p. 486)



SAXON BURIAL, CAMERTON, SOMERSET
B. VERTICAL PHOTOGRAPH OF SKELETON
(See p. 486)

PLATE II



ROCK-ENGRAVING (ARCTIC, STYLE B) IN PECKED TECHNIQUE AT EKEBERG, NEAR OSLO. (See p. 488)

The engraving is barely visible in sun-light, but can easily be seen when the rock is glistening with rain, as when this photograph was taken. Alternatively the outline is visible at night by the use of artificial light.



INSCRIBED GRAVE-SLAB, CIL BARRA, ISLE OF BARRA, OUTER HEBRIDES. (*See* p. 490)

Vertical photograph taken with Rolleiflex without any apparatus

Ph. O. G. S. Crawford

NOTES AND NEWS

may not. I think these Direct Vision finders should have a cross wire on both fore and backsights and then you could be certain of getting your exposure properly and accurately centred.

' I use a Telephoto lens for certain types of field record work, a 11 inch Ross lens on $\frac{1}{4}$ -plate focal plane camera. It is valuable for obtaining details looking down or across valleys from heights; its defect that it "concertinas" perspective for certain classes of subject. My ordinary $\frac{1}{4}$ -plate camera has a $5\frac{1}{2}$ inch lens, while my $3\frac{1}{4} \times 2\frac{1}{4}$ camera has a $4\frac{1}{2}$ inch lens which on the whole gives satisfactory perspective, except that distant mountains are dwarfed. I agree as to Agfa films: they are very first-rate indeed. Personally I prefer Panchromatic, generally with a no. 1 filter. I find that for all-round results I get the printing quality I need most satisfactorily with pyro-metol developer, a formula I had used during the war. For lantern-slide making however I prefer negatives developed with one of the newer "fine-grain" developers.

' I hope you will give us some more of these photographic hints. I hope by degrees to obtain useful records of all the innumerable sites in this West Cumberland area and any help towards good work is exceedingly welcome. Your published photographs are of the very first class, one might almost say in a "starred" class by themselves, and are a joy to study'.

We may add a few comments of our own. The two photographs reproduced in the September number (PLATES IV-V, between pp. 352-3) were taken with almost identical apertures ($f.6$ and $f.8$) and exposures ($1/50$ and $1/25$), and we can assure Mr Fullbrook-Leggatt that the difference in angle was so minute as to be negligible. It was, moreover, quite unintentional. We maintain that the comparison is a perfectly fair one. Apart from this, however, the type of film used, the speed and the lens cannot, in the case of an inscribed or carved stone, make up for lack of proper lighting, which is the prime factor. The slight alterations in aperture and time were necessitated by the change in lighting that occurred between the two exposures.

A stand certainly gives sharper definition, but with speeds of $1/50$ th and upwards, the difference is so small as to be negligible with ordinary enlargements. Moreover it is often not practical to use a stand, on account of the time taken in setting it up, or because one does not want to attract loiterers (as in street-photography) and for many similar reasons. Rapid mobilization (and sometimes equally rapid

ANTIQUITY

disappearance) are often factors to be considered if one wants to get successful pictures.

An exposure meter is certainly useful and I often use one. Nevertheless, under normal conditions, intuition is a safe guide. At any rate without it no one can become a successful photographer, even with the aid of an exposure meter.

I agree that a wide-angle lens is probably necessary for archaeological photography; it certainly is for the excavator. A panorama camera is also useful, but the great length is difficult to reproduce in half-tone without resorting to folding, and that is a serious drawback. Panorama photos would be useful, however, as an adjunct to exhibition of the specimens in a museum.

Over-exposure certainly enables good prints to be made, but at a great cost of time.

Vertical photographs of graves are infinitely preferable to obliques. They can, however, be secured with a Rolleiflex without any apparatus at all, by simply holding the camera at arm's length with the lens pointing vertically downwards. Focussing can be done beforehand in the ordinary way. If the object is too long to go on one exposure, two can be made, with a big overlap, and the prints joined together afterwards. The grave-slab* reproduced in this number (PLATE III) was taken in this way. This method is very suitable for objects like post-holes or groups of grave-goods, and could probably be applied to cup-and-ring-marked rocks with good results.

We commend these remarks to our readers. Such public interchange of experiences ought to be mutually profitable. In future we shall never set out for a day's exploration without two ash tripods, a 6-foot wooden bar, a syringe and bucket, a stand, an exposure meter, a lens-hood and several different types of camera!

* The slab is in the graveyard of St. Bar's Chapel, at the north end of the Isle of Barra, Outer Hebrides. I am indebted to Mr A. W. Clapham, F.S.A., for the opinion (based upon these photographs) that it probably dates from the 16th or 17th century. The inscription is only partly legible on the photographs, on account of unavoidable shadows, but is read by Mr Clapham as follows :—' Donald Mac(k)ul sumtyme induelt in LiOUS and . . . '. LiOUS is presumably the island of Lewis.

Reviews

THE CONCISE OXFORD DICTIONARY OF ENGLISH PLACE-NAMES. *By*
EILERT EKWALL. *Oxford University Press*, 1936. *pp.* 520. *15s.*

In the history of every subject and technique there is a period when the whole field can be covered by a single individual. Johnson compiled a dictionary of the English language. General Roy made a large-scale map of the whole of Scotland. Ogilby produced a road-book of England. Gibbon wrote a history of the Roman Empire. Buffon covered the whole field of nature single-handed. Today these tours-de-force are hardly possible. Such pioneer efforts have been replaced by co-operative undertakings. Their place has been taken by the Oxford English Dictionary, the Ordnance Survey, Bradshaw and the Cambridge Medieval History. The individual is to some extent replaced by the group or society whose members divide up the field between themselves, each cultivating his own selected strip, just as the family farm might have been superseded by the village community.

The study of English place-names is still in the first stage, but is rapidly passing into the second. That it is still possible for a single individual to cover the whole subject is proved by Professor Ekwall's magnificent effort, which is fully comparable with Johnson's dictionary. It crowns the life-work of the leading authority on English place-names, and is a masterpiece of scholarship and erudition, which will hold the field for at least a generation. It would be easy to continue in this strain, to praise the originality, the soundness of method, the accuracy of detail and the completeness of the gigantic task so happily concluded by this publication. But one of the tasks of a reviewer, however incompetent, is to find faults and to criticize, however difficult. His other task is to describe the contents of a book, and that, in the case of a dictionary, is quickly achieved.

The dictionary deals 'with the majority of what may be called the chief English place-names, especially the names of villages, but also other names, such as names of counties, rivers, lakes, hills, headlands'. A very rough estimate suggests that the total number of names dealt with is in the neighbourhood of 12,000.

Included in them are many of the chief elements entering into the formation of place-names, with references to the names in which they occur, ranging from rare words occupying a line or two to such common ones as *Stoc* which, with the instances of *Stoke*, fill nearly two pages in all. The method adopted is the only one admissible, now that the study of place-names has become scientific—that is, the historical method. Early forms are cited and references given. The list of works consulted, and abbreviations, alone occupy 13 pages. Apart from these pages, the introduction—itself a small monograph of 28 pages—describes the various types of place-names, their different origins (Celtic, English, Scandinavian, Latin and French) and the arrangement of the dictionary.

In another publication Professor Ekwall emphasizes the need of studying place-names in their topographical context. There is one group of documents that lends itself peculiarly to this treatment—the land-boundaries often attached to pre-Conquest charters. When it is possible to identify bound-marks with still-existing objects, such as ponds for instance, the mere topographer, provided he realizes his limitations as such,

ANTIQUITY

can often render valuable aid to his master, the philologist. It is only to be expected that an Englishman should have many opportunities (cartographic and geographic) of rendering such aid to one who must perforce conduct most of his researches in another land. For example, Professor Ekwall is plainly at a loss to account for the common suffix *-mere* ('lake, mere') when it is attached to upland settlements such as Buttermere (Wilts), and Ashmore (Dorset). But the explanation, provided by study and identification of certain land-boundaries, is quite simple, and I gave it 26 years ago ('The Andover District', written 1910). Mere meant a pond. The instance *throcme*, cited by Professor Ekwall himself from BCS 508 (bounds of Buttermere), can easily be identified with the still existing Rockmore pond, the place where now the counties of Hants, Berks and Wilts meet. I published this identification many years ago ('The Andover District', Oxford, 1922, p. 72) and have known the pond since I was a boy. Here the identification is quite firmly established. It may be added that there are still large ponds in the middle of the villages of Buttermere and Ashmore. Personally I believe them to have originated, with the associated upland settlements, during the Romano-British period, if not before. Further evidence in support of this view will be found in Mr H. S. Toms's admirable and too little known studies of ponds published in the *Sussex County Magazine*.¹ I hope some day to collect and publish in full the evidence of the charters bearing upon ponds. It is too full to cite in a review.

The OE suffix *-baec* ('back'), which undoubtedly enters into the composition of Burbage, Wilts (where *baece*, *bece*, a stream, is topographically impossible) also demands fuller treatment than is possible here. The word still survives in Somerset with the meaning of hill; its dialectical use here was observed by Aubrey in the seventeenth century,² and there are dozens of instances (such as Castle Batch, castle-mound) to be found upon the 6-inch Ordnance Maps. One such in Dorset (Windsbatch, near Upway), suggests (as do the land-boundaries) that the word originally had a much wider geographical extension. This is a case where the English worker, with ready access to large-scale maps and to the sites involved, has a definite advantage, and it is up to him to justify his opinion by stating it in full with the supporting evidence. The onus of proof lies upon him, and he must not expect to convince the sceptic until he has done so. On the other hand, the evidence is there now, available for all.

Yet another rather similar instance is the name of Southampton, where the reviewer has lived for many years. The prefix was adopted, he believes, not to distinguish it from the distant town of Northampton, but rather from the suburb of Northam, the site of the old town before it was removed to the present walled site. The explanation given ('*tun* in a *hamn* or river land [is not this a misprint for 'river *bend*'?]) is admirably suited to describe Northam, but not for the walled site. One or two more early forms might perhaps have been mentioned, though they do not affect the meaning (*e.g.* Hamwih, the first mention, in *Hodoeporicon S. Willibaldi*, ed. 1874, p. 14).

One of the greatest difficulties of dealing with even the small area of England is the range of contrast between the North and West on the one hand and the East on the other. (That difficulty is even more formidable when one has to deal with the whole of Great Britain, as every archaeologist realizes). There is a complete lack of homogeneity between Kent and Cornwall, between Northumberland and Dorset. To cover the whole

¹ It is to be wished that some enterprising publisher would persuade Mr Toms to re-issue his articles in book form. A Batsford 'Book of Ponds', with abundant plans as well as beautiful photographs, would be a welcome addition to the topographer's library.

² *Monumenta Britannica*, Bodleian Library.

REVIEWS

field adequately, even in one department of knowledge, is almost beyond the powers of a single individual, however learned. It is natural therefore that the Celtic portions should be more open to criticism than other parts of the dictionary. Authoritative criticisms can be made only by qualified Celtic scholars, and the present reviewer can merely point out minor slips which his own researches have revealed. In the explanation of Trigg, Cornwall, the mention of *pagus Tricurius* in the 'Life' of Sampson is cited, but the region is wrongly identified with Tréguier in Brittany; actually *pagus Tricurius* certainly refers to the Cornish region, and it is valuable as being one of the oldest Cornish place-names (excluding classical references). So too St. Kew, whose early forms Lannoho, Landeho [should not this be Landoho?] are cited, is to be identified with Sampson's Docco. In connexion with another Celtic saint, St. Keyne—of very vague historicity—we take the opportunity of correcting a previous statement³ that she was connected with Keynsham, Somerset. The correct derivation, from Caegin (the river-bend of Caegin), is given in this dictionary. The earliest form of Arthuret, namely Armterid (Nennius), is not given; the identification with Arderyd, Arthuret (Cumberland), is accepted by Celtic scholars.⁴ The correct reading of the early Celtic name of Gloucester is not Cair Gloui but Cair Gloiu (Harl. ms. 3859, fol. 185), which brings the name into line with such others as Gloiumede (Book of St. Chad marginalia) and the numerous similar forms which can be found in the Book of Llandaff. The form Gloiu is also predicated by the later form Caer Loyw.⁵ The explanation of Coquet is negatived by the decisive pre-Conquest form Cocwædesæ=Coquet Island.⁶ In general the Lives of the Saints do not seem to have been ransacked as thoroughly as some other classes of document, though it must be admitted that without scholarly editions of them they are dangerous; for the Bollandists' transcription of place-names was often shockingly careless, and subsequent editors such as W. Stevenson (not to be confused with W. H. Stevenson) often copied straight from them, not from the original manuscripts.

A peculiarly interesting name is Thruxton, Hants (Thurkil's *tun*). The personal name is Danish; and there is in the village a rectangular enclosure, with a mound in one corner, of a type quite common within the Danelaw. It is reasonable to conclude that this was the actual *tun* of Thurkil.

A ME. form of Ibberton, Dorset (Ecbrihtintone)⁷ suggests that the personal name involved was Ecgbriht, rather than Eadbeorht.

We doubt whether Featherstone, Northumberland, is derived from a 'cromlech'. Such are unknown in the county. A small stone circle (like Duddo Four Stones) is more likely. (For 'headstone' should be read 'capstone', to conform with archaeological terminology).

The interesting name of Calshot, Hants, is omitted. The early forms are Celcesora (KCD 626, A.D. 980), Calchesorde (14 c.), Calsherdas (1539). It may be suggested that the name originated from the use of the tiny harbour behind the shingle-spit by ships

³ *Custom is King*, 1936, p. 188. I am indebted to Canon Doble for kindly putting me right.

⁴ This information reached me too late for use on the first edition of the Ordnance Survey map of Britain in the Dark Ages (South sheet).

⁵ See Phillimore, *Y Cymmrodor* 1892, xi, 173; *Liber Landavensis*, ed. 1893, p. XLVII and index; John Rhys, *Arthurian Legend*, 81, 365.

⁶ Vit. Anon. S. Cuthbert, St. Omer, ms. 267, 9th century; cf. Bede, Vit. Cuthb. Acta SS. 1736, Mar. III, 108.

⁷ This occurs in a Perambulation of Blackmore Forest (Hearne's *Adam de Domerham*, 1727, II, 653); the passage was accidentally omitted from Hutchins's transcription (*History of Dorset*, IV, 519).

ANTIQUITY

or barges bringing chalk from Paulsgrove or Newport, for marling the limeless soils of the adjacent cultivations. The practice of using chalk marl is still continued near by at Nursling (Southampton), where the soil is equally barren in lime. The genitive is a difficulty, but not more so than in *Cocwædesæ* above. A similar origin is given for Chelsea (=Cealc-hyth).

The derivation of Inkpen, Berks, may be correct, but it has nothing to do with Inkpen *Beacon*, for that name was invented by the Ordnance Surveyors who placed one of their triangulation beacons there. The height, originally given (and here quoted) as 1011 feet, was the first (trigonometrically fixed) value obtained; it has been replaced by the far more accurate one of 975 feet in all the modern maps. If a hill is involved in the name it is more likely to be one immediately above the village. The form *pen* occurs also in the interesting name Sixpenny Handley, Dorset⁸ (*seax pen*) near the site of the battle of Ac-lea. It is worth noting that, if the battle of Brunanburh did actually take place near Burnswark, Dumfries, the Pennersaugh=Pen-Seax close by is another case of battle-association, suggesting that all such names denoted traditional battle-sites of Briton and Saxon.

In explaining Silchester Professor Ekwall suggests that 'the first element may be a derivation of OE *sealh* "sallow"'. He cites early forms in *Sele-* *Sili-* and *Cil-*. There are in fact quite a few ME forms in *Cil-*, and we cannot help thinking that this is derived from the Roman name of the town, Calleva, which Professor Ekwall says is related to Welsh *celli*, wood. Our explanation is not accepted by the authorities; and in view of the long period of desertion, the survival of the Roman name would perhaps be unlikely; nevertheless we still prefer it to any other.

Wayland Smith's Cave, the famous chambered long barrow, is in Berks, not Wilts (p. xxviii).

But these errors, such as they are, are trivial when compared with the rest of the book, which is a splendid and scholarly achievement. O.G.S.C.

EXCAVATIONS AT NUZI. Volume III: Old Akkadian, Sumerian, and Cappadocian Texts from Nuzi. By THEOPHILE JAMES MEEK. (Cambridge, U.S.A.: Harvard University Press. London: Humphrey Milford, 1935). pp. LIX, and 93 plates. 6 dollars.

In a volume of texts from the site of Nuzi (not far from the modern town of Kirkuk) we are accustomed to expect a series of legal records belonging to a non-Semitic people now generally called Hurrians, who wrote however in a Semitic dialect. Professor Meek here presents us with something quite different: the tablets found in a lower stratum which antedates the coming of this people, and belongs to the period when the land was under the rule of the Sargonid kings of Agade, as testified by the script, language, form, and names which characterize these tablets. At that time, about 2600 B.C., the place was not yet called Nuzi, which is presumably a Hurrian name, but it had another appellation possibly to be read Ga-sur. In a very full and useful introduction the author discusses the classes of his material (which includes a few 'Cappadocian' tablets); the historical implications; places mentioned in the texts which cover a good deal of country from the Tigris eastwards and also southwards into Babylonia; the names, with their preference for iterative forms, and some special texts such as the very interesting 'map' with its clear marking of the compass points, and its notation of mountains and rivers; he also translates a group of letter-tablets.

⁸ For other instances see ANTIQUITY, 1934, VIII, 338-9.

REVIEWS

The introduction concludes with a full list of names, and a descriptive catalogue of all the texts, which are mostly lists, receipts, and the like. This is doubtless the most satisfactory method of publishing records of this kind which are not such as to make a full translation worth the space that it would occupy. The copies of the cuneiform are good and clear.
C. J. GADD.

EVIDENCE OF EARLY MAN IN NORTH AMERICA. By EDGAR B. HOWARD.
The University Museum, Philadelphia, Pa., The Museum Journal, 1935, vol. XXIV.
pp. 61-176.

In this monograph the author describes the results of his field-work in investigating caves and shelters in the Guadalupe Mountains, and in the old lake-beds near Clovis, both localities being situated in New Mexico.

These investigations have established the fact that associations of extinct animals occur with stone artifacts, and offer evidences that man lived in North America at a time when climatic conditions were very different from those of today at the same latitudes. To ascertain as precisely as possible the time when man first appeared in North America the author has brought under observation many different phases of the problem, including the latest estimates of Late-glacial and Post-glacial times, the migration-routes *via* the Bering Strait, sundry anthropological deductions, and definitions of the two types of stone implements that occur, namely the Folsom point and the Yuma point.

Detailed sections of the lake deposits are given and the location of the fauna and the artifacts are recorded, while an adequate number of sections, plans and clear photographs illustrate the letterpress.

His comparative scales of Late-glacial time-estimates, according to different observers, emphasize the wide divergence of opinion among them and call attention to the comparative lack of value of such estimates.

The sections dealing with the typology of the American 'points' is of much interest; as is also the observation that these two types so far have not been recognized in Europe.

His researches tend to prove that there is no longer any question that man was contemporary in America with types of animals that are now extinct, or with types that now live elsewhere, mainly in colder climates, either in higher latitudes or at higher altitudes, or both. Such, for example, as the Musk Ox.

The artifacts found in association with the extinct animals are apparently always one or the other of those types of points described as Folsom and Yuma or Folsom-like. The Folsom-like points have been found associated with extinct animals but not in recent camp-sites. The style of flaking of these points is such that it can easily be recognized as different from the work on the other types, and the points have more highly polished surfaces than the implements known to be recent.

Comparison of the technique with that of European standards indicates that the points are not earlier than Late Palaeolithic. Finally, the author, having considered the several opinions of investigators of the subject, concludes that ten thousand years is the most satisfactory estimate of the time that man has been in America.
H. DEWEY.

MENSCHEN DIE GESCHICHTE MACHTEN. Edited by P. R. ROHDEN. 2nd edn., 2nd impression, 1934. Vienna: W. Seidel and Son, Graben 29. 2 vols, 9 RM each volume (bound).

First published in 1931, this most interesting work went into a second edition in 1932, and was re-issued with but slight changes in 1934. It contains nearly two hundred

ANTIQUITY

brief biographies of men and women who within a span of some four thousand years have 'made history'. Each biography takes the form of a self-contained essay written by a scholar who is an accepted authority on the relevant period. While Austrian and German writers are in the majority, foreign scholarship—English, French, American, Dutch, Polish, Czech—has been freely placed under contribution, and the treatment of each subject is dispassionate and unbiassed. The term 'history' is interpreted *in senso stricto*, as meaning constitutional and political history, and as one turns the pages it is tempting to substitute the title 'men who have made or given occasion for war'. In ancient and medieval times these are kings and emperors, but from the Renaissance onwards the names of statesman and revolutionaries become increasingly frequent until with Napoleon III monarchs disappear altogether. Thus a chronicle which opens with Sesostriis, Hammurabi and Amenophis IV closes with President Wilson, Lenin and Georges Clemenceau. Space is found for a few political thinkers, Aristotle, Thomas Aquinas, Machiavelli, Hobbes, Bentham, for example, and for the more belligerent Protestant Reformers, John Hus, Luther and Calvin, but men of science find no mention, nor men of purely religious thought. The Jewish contribution to history is exemplified not by Moses but by Isaiah, not by Jesus but by St. Paul, and after centuries of eclipse the Jew reappears in the modern period in the guise of a Rothschild or a Disraeli. The last English name to appear is that of Joseph Chamberlain, apostle of Imperialism, a reminder that men who make history are not to be confused with *great* men. The problem of whom to include, whom to exclude, must have cost the editor, Herr Rohden, much careful thought, and no doubt every historian would differ in his judgment, while again a quite different view would be taken by the intelligent layman. Over a score of the names found in this list were unknown to the present reviewer, who felt absolved from a charge of gross ignorance on finding that they were usually unmentioned in the *World History* of Mr H. G. Wells. Many of them were of men concerned with the building of modern Germany, others of men who made themselves felt as eastern neighbours of the Byzantine and Holy Roman Empires, all of them those whose careers held no direct interest for Englishmen. Any list of 'men who made history' must, in fact, have a national bias, and to German historians it is axiomatic that the core of Western civilization as well as its key must be sought in the Germanic lands.

Only three women take rank as makers of history, and all by virtue of their absolute monarchy, since neither the woman statesman nor the woman Führer has yet appeared; the three are Elizabeth of England, Maria Theresa and Catherine the Great: the siren woman, a Helen of Troy or a Cleopatra, makes history only vicariously.

The biographies in themselves are admirable: well-balanced, lucid, concise. We carry away a clear-cut cameo of Ptolemy Soter, introducing a new epoch in classical science and literature; of William the Conqueror, welding an England that was henceforth to count in world politics; of Richelieu, the greatest statesman France ever possessed; of Leo XIII, who made the Papacy once more a force to be reckoned with; of Lenin,* whose dictum regarding colonial or 'exploited' peoples is reckoned as his most original contribution to modern thought. 'Wie sieht der Mensch der Gegenwart aus, wohin blickt er, was erstrebt er?' asks Professor Eibl in the concluding essay, and goes on to say: 'Das weltanschaulich Wichtige am ständischen Gedanken ist die Verbindung von individuellem Geltungs- und Tätigkeitsdrang mit der Einordnung in die nationale und staatliche Gemeinschaft'. How harmless and even admirable and

* In the edition circulated in Germany Lenin is omitted!—EDITOR.

REVIEWS

acceptable such a doctrine appears, until we remember to what uses it has been turned. Yet on broader ground we can agree with the writer. In the present age material progress has outstripped the progress of thought, and we anxiously await a new synthesis of metaphysics and technics, or more simply of religion and science: 'dann würde der Okzident doch wieder das geistige Zentrum der Welt'. E. G. R. TAYLOR.

AN HISTORICAL GEOGRAPHY OF EUROPE. By GORDON EAST. *Methuen*, 1935. pp. xx, 480, with 58 maps. 15s.

Nemesis has overtaken the historians, for it has been left to clever journalists to garner the harvest of their meticulously specialized scholarship, and to retail it to the public. The younger men, however, are breaking away from tradition, and can even assent to the proposition that we are not finally and completely debarred from knowledge of the Dark Ages by the absence of 'documents'. Archaeology, place-names, and field-maps are taking rank as evidence, but with the disconcerting consequence that, unless he is to make a fool of himself, the historian must be something of an archaeologist, something of a philologist, even something of a geographer. For he must make critical use of the conclusions of these fellow-workers. Breadth of learning may no longer be completely sacrificed to the claims of depth.

Mr East's *Historical Geography of Europe* well illustrates the problem, for it is an attempt to reconstruct the European scene, the 'cultural landscape' as it is sometimes called, at different periods in the past. Up to a point he side-slips archaeology by taking as his starting point the period at which the Roman Empire was already established, but in chapter III he is obliged to tackle the problem of the Barbarian settlements. Here he gives us the results of the regional studies of Gradmann and Des Marez, and of the wider syntheses of Dopsch, and so becomes involved in the difficult themes of past climates, soils and vegetation. Unfortunately the British Isles, in regard to which readers will be more familiar with the arguments, are excluded from the scope of this book. The pattern of settlement naturally leads to a consideration of Meitzen's now more or less accepted classification (although without its racial connotation) into *Gewanndörfer*, *Einzelhöfer* and *Weiler*. Geographical conditions have clearly played their part in defining the distribution of the contrasting types, but is the connexion a direct one, or is it true that *Gewanndörfer* are found only where the land was already under cultivation when the Germanic invaders arrived? This, however, only throws the geographical problem back to an earlier day. Can we accept the thesis that neolithic Europe was, *as a whole*, drier and warmer than today; that there was consequently a greater extent of 'open' formations of the *steppenheide* type; that these areas were under neolithic cultivation, and that consequently they were saved from afforestation during a mild and wet period that supervened about 700 B.C.?

Mr East feels the difficulty of ranging across two or three millennia, and hence in the last part of his book selects certain sub-regions for more close examination, among them Sicily and the Danube. In the case of the latter he is at pains to show that archaeologists and historians are alike at fault when they speak of the Danubian 'highway' or 'corridor'. There is little evidence that the river was ever systematically navigated, or even followed along its banks, from source to mouth. Here, perhaps, the author is tilting at windmills. Professor Gordon Childe, for example, whom he cites particularly, seems to mean no more by the term 'corridor' than the broad belt of low plains and plateaux that can be loosely grouped about the Danubian axis. A precise use

ANTIQUITY

of geographical terminology can only come with a more precise knowledge of geography, and particularly of the topographical map.

The 58 illustrative maps which Mr East has provided are well thought out as regards their content, less well as regards their technique. There is more virtue than at first appears in giving just this thickness to a line, just that shape to a symbol. The random hit-and-miss method of map-drawing can no longer be allowed to pass unchallenged. It would not be just, however, to end this review on a note of criticism. As Mr East truly remarks, 'The historical geography of Europe . . . remains still in large measure an unexplored field for research'. Laying aside academic caution, he has taken a plunge into the unknown, in the hope that others will follow. We are indebted to him.

E. G. R. TAYLOR.

MANUEL D'ARCHÉOLOGIE PRÉHISTORIQUE CELTIQUE ET GALLO-ROMAINE JOSEPH DÉCHELETTE. Vol. vi, *Archéologie gallo-romaine*, par Albert Grenier, part II, *Archéologie du sol; Les routes*. Paris: Picard, 82 Rue Bonaparte. pp. 1-468, figs. 1-156, 3 folding maps. Price not stated.

M. Grenier and this reviewer have not in the past agreed as to the scope of a general archaeological survey, and we shall no doubt agree to differ. The subject of this volume, however, demands far less comparative material and deals with a subject more concrete than the fragmentary remains of fortification in Roman Gaul. It therefore allows its author a better opportunity to display his gifts of clear arrangement and admirable exposition, fortified by well-read scholarship. The chief grounds for our former criticisms are here removed, for the subject as here treated has demanded little personal field-work and a deep knowledge of the French subject-matter. M. Grenier has a task well suited to his ability, and his happy choice of an introductory quotation from Bacon attests his faith in our power to appreciate the instructive volume that lies before us.

The first part of the work (1-144) is a careful collection of ancient authorities on road-classification, road-making, and the relation of roads to land-survey; on the growth of the road-system in Gaul, as testified by literature and milestones; on milestones, inscribed and uninscribed; on itinerary stones and kindred objects, and the itineraries whence they are derived. All this material is treated with a fullness rare in English monographs, and is therefore particularly welcome. There is little to add, but it may be noted that there is no mention of the preliminary surveying for roads.

In dealing with these landed interests, there are traces of two views in M. Grenier's work. The first (22) asserts that the land-surveyors redistributed adjacent property conformably with the road-system, and that this kind of procedure happened throughout the province; the second (399-400) contends that the Gauls may have already done this for themselves, if in less regular fashion than the Roman. But proof of either system is very weak, and Grenier is unwilling to accept the Orange inscriptions, though the fact is that while some of these refer to built-up areas, others indubitably refer to fields. He is therefore unable to cite a single example of the application of colonial centuriation in Gaul: the only instance is Agrippa's Ubian land, if this is certain. As for native fields, no instance of a Celtic network is yet forthcoming; and British examples, quoted as a general parallel, show that while minor re-adjustments occurred, the system as a whole remained as it was, exhibiting irregularities which would have been the despair of any Roman surveyor. On the other hand, British examples of centuriation are dubious at best: Haverfield was very diffident about his own example

REVIEWS

west of Colchester (*not* Rochester !) and a comparison of the *graticolati* of Lugo or Padua suggests that he was justified. Nor is the recent attempt to define the territory of Lincoln in better case. In fact, much more must be learnt before even advancing the view that agrimensorial operations in Gaul were based upon the road-system. Caesar's land-allotments apparently were not (Suetonius, *Vita Caes.* 38); and too little is known of the reforms of Augustus; at Orange, the town-plan cuts very oddly across the earlier road-system (*JRS*, xxiii, 152).

But, like the *census*, the provincial road-system was the imposition of Augustus: Caesar's armies were well used to do without roads, though Grenier most usefully collects the evidence for bridges. The Republic had built the well-known Via Domitia, but even in Augustan days this was not yet a first-class road, as Grenier demonstrates; and the fact that the Rhine road has yielded uninscribed stones like those of Pont de Cart, must, as he implies, give pause to attempts to assign these to an earlier period without further proof. Milestones give little proof of Augustan activity outside Narbonensis, and confirm Strabo in showing that Agrippa's trunk roads linked the provincial capitals and the Rhineland, as the headquarters of civil and military administration. The *civitates* were left to evolve their own systems, as Grenier well brings out, and the major roads in the northwest and elsewhere were only cared for in detail when Claudius had acquired Britain. All this is evidently the result of the concentration of military power upon one front, and in marked contrast with the systems of Spain and Britain, where the trunk-roads throughout the province were government-built, because of the wider dispersal of forces and the less wealthy resources of the smaller tribes. The emergence of the Gallic *leuga*, as contrasted with its submergence elsewhere, is no doubt due to these factors: while the local itinerary-stones testify in another fashion to local interest in the roads of a tribal unit. The presentation of details which accompanies these generalizations is not always quite easy to follow. Overmuch space is given to Forrer's treatment of a lost stone: and fig. 25 may not be a dedication, but could resemble *CIL*, xiii, 9097. The argument on *tabellarii* is curious. Grenier accepts Oxé's interpretation of *ILS*, 5807, as furlong-stones; but what is the connexion between these and Father Le Bonnetier's stones, spaced at least ten to the mile? His witness is not indeed to be ignored, but what does it prove? Again, the treatment of uninscribed milestones might have begun with sound examples, instead of the tombstone of Viromarus, or the shapeless stone of Le Mans. Side by side with these points, however, there is much interesting matter. The milestones of a private dedicator to the sanctuary of Mercury are exceedingly interesting. The correction of the Antonine Itinerary from Pamplona to Dax is excellent; the Iberian mile is not to be admitted here, though it occurs on the Astorga tablets, in the less Romanized lands.

The itinerary-stones and kindred objects will be of particular interest to students of a province where no such monuments have yet been recorded (except the Rudge Cup). The discussion of the Antonine Itinerary is particularly interesting as bringing out the general argument for dating the work, at a time when a closer dating for certain British sections has been attempted. M. Grenier makes a clear case for the document being Diocletianic in its present form, though ultimately derived from earlier work, together with its name. The difficulty is to decide when the Scottish portion was amputated, and to what moment the North Welsh portion belongs, or whether these different sections synchronize at all. The question is not decided by the Severan frontier, as he suggests. There are excellent sections on the Peutinger Map, the Ravenna List and the Bordeaux Itinerary; though it would be interesting to see where Kubitschek would fit the various

ANTIQUITY

itineraries implied by the Vicarello goblets and the Astorga tablets into his family tree, which is too naively small to fit the many possibilities.

Chapters VII and IX, which deal with the survival of Roman roads in the Middle Ages, to influence later distributions and place-names, might well have lent themselves to conflation and curtailment. But this is the comment of a generation with a lively faith in field-work. France also has produced some fine field-workers on her roads, from Bergier to Matty de Latour. But field-work is arduous; on the whole, archives offer an easier field, and France is a paradise for *archivistes*. The result is these two chapters, full of ingenuity and irrelevance, touching only the fringe of the problem. An odd by-product is the attempt to apply the method of tracing Roman roads by associated remains to archaeological material, such as tombs and temples. Figure 96 provides a good example of what would happen, suppose the known road were removed from the map, and we were left with the temples. The treatment must have been written as a warning, for M. Grenier concludes with the words: *nous venons, au cours de ce chapitre, de constater surtout la difficulté de cette tâche*. The sounder methods are those of Larue and St.-Venant, to which he accords important paragraphs in the next chapter.

The chapter on the course of roads is one of the most interesting in the book. The straight line was dictated by surveyor's convenience, and hardly with a view to field-survey. It must often have seemed like the Moscow railroad of Tsar Alexander; but the choice was not arbitrary, since there were no maps to dictate it, and important natural features were never disregarded. As soon as the engineers get into difficult country, some striking watershed and contour courses are in evidence. Very interesting, too, is the observation (well paralleled upon Trajan's Column) that bridges tend to be more numerous in military areas, to ensure open communication at all seasons. The votive deposits at such crossings will interest students of the Tyne bridge, while the footbridge at Montignies St. Christophe is a rarity worth remark. The posting-stations need careful study. If Jublains is a *praetorium* with *horrea*, it is a remarkably small one: and Swoboda was disposed to take the structure at Thesée as a villa, which it much resembles. Neither structure is in the least like the stations at Petit St. Bernard or Noreia.

The chapter on structure follows traditional lines, and includes the Latin terms derived from architectural contexts where road-making is not in question. Only the poetic *summum dorsum* is relevant, and in view of the metre, one cannot rely upon it. As Grenier well observes, these terms have ridden and obscured the observations of all since Bergier, and one may wonder why they should still be perpetuated. As in this country, the attempt to collect a body of information about Roman road-sections reveals how very sporadic the work has been, and how insufficient a basis exists for more than the most general survey. Large paving was no doubt more common in towns than the open country, if town-roads and their width at gates are relevant to a general survey. The great road from Cologne to Boulogne was paved for long stretches in large blocks, as was also the trunk road from Reims to Toul. The examples figured from Vienne (figs. 87, 104) both lie just outside the town, not beyond the suburbs. Most of the roads however, were the familiar gravelled type, of which many examples, largely from the German area, are cited. An exceedingly interesting minor class is the mountain roads, with their rock surfaces and cut runnels for wheels, to prevent slipping on the precipice.

The work closes with a valuable bibliography, and embodies a useful collection of maps to various scales. The standard of illustration throughout is greatly improved

REVIEWS

from the last volume, especially the printing of the half-tone blocks : but the nature of the subject has imposed that most of the illustrations should be line-blocks, and these are all well produced.

I. A. RICHMOND.

WEALDEN GLASS : THE SURREY-SUSSEX GLASS INDUSTRY (A.D. 1226-1615). By S. E. WINBOLT. *Hove : Combridges, 1933. pp. 86, illustrations (including 14 maps and plans).*

This book was published in a subscribed edition of 500 copies more than two years ago. Profound apologies are therefore due to the author for reviewing it at this late date. With the exception of Hudson's *Nature in Downland* most books on Sussex seem to be written in a chattily intimate, local-patriot style.* Mr Winbolt follows their example, but his is the only book on the Wealden glass industry (as he well calls it), and amid its discursiveness there is new and useful information. Its defects would make a long list. The first chapter, 'Egyptian, Roman and Saxon glass', better omitted, contains no reference to Kisa (1908) and Morin-Jean (1913) and little evidence that these not unimportant authors have been read, to say nothing of such newcomers as Fremersdorf, Rademacher and Harden. The old nonsense about blowing at Beni-Hassan is well to the fore (p. 1). Glass was not a 'Roman technique' (p. 4), but several techniques, Syrian and Egyptian. The 'exotic', but quite ordinary, neck of +OYTIENΩN XPΩ will not convince Mr Winbolt that orientalism was rife in the North of Europe, or lead him to its Rhenish kindred. The cone-beaker with zig-zags at Worthing is described *tout court* as 'Saxon "twisted" ale-cup'; not a word about 'hroden' or *Beowulf*. Is 'palm glass', in quotation marks, from the same source, and are we expected to infer from these bald captions the size, colour, find-spots, and present location of the objects illustrated?

In three adequate chapters on the Normandy and other families who settled in the Weald, Mr Winbolt rightly stresses the importance of the glass industry in obtaining a royal charter for Chiddingfold (1300), and he has also discovered that John Paytoe by his will of 1535 bequeathed his moulds and tools to his son. The last fact is important. It tends to confirm the impression left by medieval glasses that a 'line' once established changed little in generations. It argues a degree of decorative feeling not without parallels in the blown ribs of German 14th- and 15th-century glass. And if moulds were worth bequeathing, the question must arise whether glassmakers, in the Weald, understood the use of (heated) metal moulds.

The foundations of this study were laid many years ago by the Rev. T. S. Cooper of Chiddingfold, his daughter the late Mrs Halahan, who was unmethodical but accurate, Mr Wyndham Hulme and others. A body of names and dates was thus collected from local parish registers, wills, deeds of sale, and the like. There is probably no reason to doubt the accuracy of these facts, but Mr Winbolt, living in Sussex with his sources all round him, gives few references to primary authorities. Where are the legal documents and who has read them? What are the exact dates and wording of register entries? An extensive passage is blithely quoted from a borrowed copy (p. 45).

Chapter v starts well on glassmaking in Kent and ends with a sighing and a sobbing over 'veteran oaks'. After this Mr Winbolt reaches the glasshouse sites on which he has dug. He lists 27 (chaps. v-ix), adding in many cases the latitude and longitude and describing the siege-pot fragments, furnace droppings and vessel and window-glass

* Not Dr Curwen's *Prehistoric Sussex* however.—EDITOR.

ANTIQUITY

fragments. The identification of the sites with recorded place-names seems to require more support from local topography, early maps and place-name studies, subjects which do not appear in the list of books (p. 74). And Mr Winbolt does not realize sufficiently how difficult it will be for the next civilization to trace how kilns and sites in the Potteries have changed hands in the last two centuries. But one is disposed to agree with his main thesis, that a rather hard pale-green metal, found a foot below the ordinary level and not unlike certain late 'Roman' metals, sometimes free-blown and sometimes blown *with* a mould, is anterior to the beautiful *Waldglas* of the 16th century. Whether or not this fabric goes back to the Laurences, it is not credible that a flourishing glass industry existed in the Weald for 300 years without producing the phials, bottles, lamps and urinals of common medieval use. Mr Winbolt's tendency to close the 'mediaeval gap' has been a marked feature of other glass studies published in recent years.

We may be grateful at the end for the list of dates and the translations from Theophilus and Agricola, though 'Heraclius' might have been added, with the texts of all three. Mr Winbolt's scoop is the first translation in English of the notes on *Glaskunst* compiled in Rome by the Swedish monk Peder Männson (c. 1460-1534). Männson is especially interesting for his mention of the 'point' (Swed. *pig*) which produced the high, sharp, conical kick of medieval bottles, both in the Near East and in Europe, and was still used in English phial work of the 17th century. As for the illustrations, too many of them are devoted to the Wealden picturesque. They are not even numbered. The drawings of fragments are far from revealing and the many sketch-maps more useful than elegant.

Professional archaeology has been inclined to turn up its nose at this 'lone' excavator and his predecessors. He does not obey the rules which sometimes make archaeology unreadable. He specializes in an industry and its history. Professional archaeology rarely does so, because it is usually unaware of the most ordinary technological facts. It cannot therefore complain if Mr Winbolt waves his spade a little wildly. He has had the good sense to see his subject with the eyes of a modern body for industrial research, the Society of Glass Technology. This gives him standing in a living industrial world which professional archaeology does not yet possess.

W. A. THORPE.

DIE BANDKERAMISCHE ANSIEDLUNG BEI KÖLN-LINDENTHAL. By WERNER BUTTLER and WALDEMAR HABERER (Römisch-germanische Forschungen, 11). pp. 178, 83 plates, 2 plans. Berlin, Walter de Gruyter, 1936. 2 vols.

The Danubian village at Lindenthal near Cologne is the first neolithic village to be excavated and published completely. The information to be expected from such a complete excavation is naturally of a quite different order from that obtainable by test-sections through ditches and dwellings, such as have hitherto contented British and Continental archaeologists. We may expect light on crucial economic and sociological questions which cannot be solved by small-scale excavations, however scrupulously conducted. Nor will our expectations be disappointed. Not only has the long campaign at Lindenthal firmly established a ceramic sequence and brought to light new types of construction that could never have been defined by any partial exploration; it has also furnished data for reconstructing the sub-Boreal landscape, for estimating the population of a Danubian village and for studying its agricultural economy.

The more outstanding conclusions have already been presented to readers of ANTIQUITY in an article (March 1936, pp. 25-36) by one of the excavators. It should have served to whet appetites for details as to the methods of excavation, the evidence

REVIEWS

on which Buttler's conclusions were based and other results obtained. This demand should be satisfied by the complete, exhaustive and well-illustrated publication under review. It will be recalled that the area excavated covered about $7\frac{1}{2}$ acres, that it comprised a village or succession of villages occupied over a period long enough to be divided into four phases, and that a variety of structures—ditches and palisades, pit-dwelling complexes and refuse pits, store-houses and barns—were recognized within it. All are here described in detail. Two large plans on a scale of 1 : 500 illustrate the totality of structures traced; eight plans on a scale of 1 : 1200 show the distribution of the several types within the excavated area and between the several chronological phases. Plans and sections of the ditches and of the most important dwellings, pits and barns are added, and every one is described in detail in the text.

The measurements upon which all these plans are based were made by one, or at the most two, professional archaeologists who had at the same time to supervise the work of as many as 100 labourers. What a monument to the energy and devotion of Herrn Buttler and Haberer and to the efficacy of the training and encouragement they received from Dr Bersu. The concise account they give of their methods forms in itself quite a manual of the excavators' technique (though it must be remembered that the löss on which they worked, if inferior to chalk, is a far more favourable soil for the recognition of disturbances than the gravels or clays underlying too many British sites). Their labours have produced a picture of a Danubian settlement quite different from any available when I tried to summarize the evidence eight years ago. Their methods and thoroughness brought to light structures not marked by any occupation-deposit. Thereby the hotly disputed question whether the Danubians built rectangular or curvilinear houses has been settled: their dwellings were curvilinear but they also erected rectangular store-rooms and barns side by side with these. Buttler happily illustrates the construction and function of these various structures by the modern analogies from Hungary and the Balkans which he has already described in *ANTIQUITY*.* Incidentally he draws attention to a rectangular store-house on piles in our own Glastonbury lake-village, unrecognized by its excavators.

From the house-foundations Buttler is able to estimate the population of this typical neolithic village at the time of its widest expansion at 'between two hundred and three hundred souls': the figures two to three thousand mentioned in his *ANTIQUITY* article, must be due to a slip. He further adduces valid grounds for computing the total life of the settlement at only three centuries and the duration of the whole Danubian I development at not more than 500 years. He uses this deduction to justify a fresh protest against exaggerated estimates of the length of the New Stone Age in northern Europe.

The excavation yielded abundant relics, notably Danubian I pottery of all varieties, from the simplest linear ornament through Menghin's music-note style to the complex hybrids, familiar from the Belgian Omalian. The excavators explain why simple stratigraphical observations do not suffice for determining the sequence of these styles and why the contents 'of a single dwelling-pit' need not constitute a chronological unit. The discoveries, often reported, of several distinct styles of pottery 'in one and the same pit', are no proofs of their contemporaneity; instead the occurrences of the several styles in the intact floor-deposits of the various dwelling and refuse-pits were tabulated. From the statistics thus compiled it is seen that the fourteen ceramic types

* His article was first published in the *Bonner Jahrbucher*.—EDITOR.

ANTIQUITY

distinguished actually fall into four groups, the components of each repeatedly recurring together on the floor of the same pit. A small number of cases in which the intersection of two pits revealed the relative age of each sufficed to establish the sequence of the several groups. It is by this means that the long dispute as to the relative chronology of Danubian pottery in western Germany has at last been settled.

In the study of the site and its relics the assistance of other disciplines was most profitably invoked. Thus microscopic examination of the pottery proves, what had been inferred from stylistic peculiarities, that some vessels were actually imported into Lindenthal from other villages, some probably as far away as the mouth of the Main. North of the Balkans this is the first case of trade in articles so fragile as pots being rigorously demonstrated for neolithic Europe; in Thessaly neolithic commerce in pots was proved by Wace and Thompson twenty-five years ago. Incidentally such imports help to extend the relative chronology, established for the Cologne district, to other parts of the Rhineland. Petrographical analyses show that some stone implements too, or at least the materials for their manufacture, were imported—a fact not surprising to British prehistorians. The geological survey of the site again provides the data necessary for appreciating the environment to which the village was an adjustment.

Altogether the book is impressive testimony to the skill and devotion of its authors, to the foresight of the Römisch-germanische Kommission of the German Archaeological Institute and to the enlightened patriotism of the State and municipal authorities. The result is a precious contribution to prehistory—not only to the solution of special technical problems such as the determination of culture-sequences and house-types, but also to the more humane study of the economy and social structure of a neolithic group. And Buttler's concluding remarks should be taken to heart by prehistorians in all countries. 'In prehistory it is now time to turn from small special problems to wider vital issues and in excavation to attack great objectives rather than to follow the reverse road. If only one or two complete settlements, characteristic of each culture and each epoch, could be fully excavated, we should gradually accumulate the data from which to build a reliable picture first of the material, and then of the spiritual, culture of the past. Then many theories and hypotheses with which prehistory still has to work, would vanish to make room for a sure foundation for further research'. But have we in the British Isles yet reached the stage, achieved in Germany by the innumerable small excavations of the past, when we should turn from section-cutting and testing to concentrate on operations which must last over many seasons and absorb large sums? V. G. CHILDE.

DEDALICA: a study of Dorian plastic art in the seventh century B.C. By R. J. H. JENKINS. *pp.* 94, and 11 plates. *Cambridge University Press*, 1936. 7s 6d.

In this small and useful book the author has attempted to bring some order into our knowledge of the art that developed in the Peloponnese and Crete in the earliest age that can correctly be called Archaic, which followed immediately after the Geometric. His primary difficulty is with chronology within the seventh century, a century notoriously free from fixed dating points. As he says (p. 60) 'the independent external evidence for dating is disappointingly meagre. Not a single head of which we have hitherto made mention forms part of an extant grave-group'. He therefore makes 'the assumption that Dedalic heads of all schools which showed the same stage of stylistic development are contemporary'. But this otherwise reasonable assumption meets at once an insoluble obstacle in the strange case of Etruscan bucchero vases, dated firmly to 560–525, which

REVIEWS

are decorated with 'Dedalic' heads of a century earlier in type. But he offers no solution: 'conditions', he says, 'of space and relevancy do not permit a discussion of this interesting problem here'. That, I fear, is not the way to dispose of an instance which stultifies a general principle proposed as the basis of the method of classification. Nor does his entire omission of the most important locally-made Sicilian examples of the 'Dedalic' style help matters. Can we be sure that here, too, there is no time-lag? the earliest Sicilian terracotta figures from Selinus and western Sicily look as though they belonged to the earliest Dedalic period in the author's classification—that is to say to a date before the foundation of Selinus! If they are later, then they give us a second instance of a delayed style, similar to the Etruscan, which again stultifies the general assumption. That is the danger of establishing typologies—one has to omit the inconvenient.

Similar difficulties arise from a consideration of the Prinias goddesses. The author finds them so surprisingly sophisticated in treatment, though their structure is 'Dedalic', that their style 'is one of neatness and slickness combined with a slight self-consciousness and over-emphasis of archaic detail' that he is forced to exclude them from his typology; he assumes that they arise either from 'a peculiarly refined and mannered caricature' of the 'Dedalic' style that arose just after its close, or alternatively, that they are copies, made to replace damaged archaic work of authentic style. I have yet to hear of an archaic style that caricatures itself, and the appeal to damage and replacement must not be made unless it can be justified. Is there proof of any kind of such damage to the Prinias temple?

This repeated exclusion of the inconvenient from a perhaps too rigid classification suggests rather that the classification needs overhaul. While I have no doubt at all that Mr Jenkins's general arrangement of this most interesting Peloponnesian style, which he calls 'Dedalic', is correct in general, it is too rigid. Nor has he made it cover enough ground. His omissions are remarkable. I can find no mention of the Thera stone *koré* (who is unique among Dedalic sculptures for the treatment of her hair), and a bare footnote reference to the one important male Dedalic *kouros* fragment in Delos, of life-size and a perfect parallel for the Delphian bronze *kouros* which the author treats at length. Further, while the Cleobis is treated in full detail, the Delian colossus also receives a mere footnote. Both are post-Dedalic and deserve discussion together. The Dirmys and Kitylos pair from Boeotia are strangely assigned to the 6th century, yet they must be another unfortunate example of 'delayed Dedalic' if this is so.

Another omission, quite surprising, is that of the well-known group of marble lamps decorated with 'Dedalic heads'. It would have been interesting to see what provenience the author assigned to them, whether Cretan or Sicilian or Peloponnesian. Nor is the stone head from a half-scale 'Dedalic' statue at Sparta (Artemis Orthia) dealt with at all.

Finally it is dubious if the term 'Dedalic' can be assigned at all to the style with which the book deals. The oldest Greek references to Daedalus make him an Athenian, and, as Miss Richter has pointed out (*Metropolitan Museum Studies*, June 1934), Daedalus may well signify that movement in art exemplified by the late 7th and early 6th century Attic colossal sculpture of which the New York, Sunium and Dipylon *kouroi* are instances. If Daedalus meant anything coherent to a Greek, and there is little doubt that he did, he signified a sudden move of art towards 'life' and away from that strict formalism indicated by the works discussed in this book. That movement came at the close of the 7th century, and the 'pupils of Daedalus' are all datable to the first half of

ANTIQUITY

the sixth. How then can we employ the term for works dated by the author to 670 B.C. ? Significantly he remarks of the Cleobis of Delphi, which he discusses fully, 'It is . . . ironical that Cleobis, should be in fact outside the group which has inherited the name of the artist'. It is indeed ironical, but rather because Mr Jenkins and other archaeologists have arbitrarily assigned the term 'Dedalic' to a period that it cannot cover. Some other term must be used—'seventh century Dorian' is adequate. Certainly sculpture of that age had not 'inherited' the name of Daedalus. To allege that is simple incorrect. It has been inherited only since the war and is a term that, like many in archaeology, should be replaced by one less misleading.

The language in which the book is written is more free from jargon than many specialist works of this kind. Indeed it is fluent and pleasant to read. But I have noted the following: 'declension' for 'decline', p. 44; a group of works of art 'centres in' a certain statue, p. 51; the group can 'collect round', or the statue can be the 'centre of', but a group cannot 'centre in'.

The term 'Dedalicism', used frequently, is a horror, due for rapid extermination and only to be used verbally: also 'tripertition', p. 33. The plates are good, though the Auxerre statue should not appear as a cast.

STANLEY CASSON.

A HISTORY OF CARMARTHENSHIRE. Edited for the London Carmarthenshire Society by SIR JOHN E. LLOYD, F.B.A. Vol. 1. From Prehistoric Times to the Act of Union (1536). *Cardiff: William Lewis Ltd., 1935. pp. xix, 375, with maps, and illustrations. 30s (to subscribers 42s for 2 vols.).*

Wales, probably because of its comparative poverty, is not rich in county histories of the old type. By way of compensation it produced the earliest, and in many ways the best, of all—George Owen's *Description of Pembrokeshire*, a work that astonishes by its insight and accuracy of observation. It was written in 1603 but was first printed by Fenton in 1796 and not properly edited until 1891. Some years ago a scheme was initiated for a series of county histories on the lines of the Victoria History of the English Counties, but it failed to materialize.

Carmarthenshire has never possessed a county history of any kind, but in 1930 the matter was seriously taken in hand by the London Carmarthenshire Society and the present volume is the first fruit of their effort. The Society can be congratulated upon the fact that during the years of financial depression such a scheme could be carried to completion in a county that is in part a 'special area'.

In two ways the plan of the present volume departs from some other efforts of the same kind. In the first place, it contains a short introductory chapter on the 'physiographical background', but with this exception it does not attempt to cater for the geologist, the botanist, or the zoologist. A great deal can be said on both sides of this question. The activities of man are conditioned by his surroundings, and historians have been very apt to neglect this essential aspect of their subject. On the other hand a specialist account of the botany, zoology or geology of a county goes beyond the requirements of the historian and seems to be more suited to publications that appeal to the students of these particular sciences. It is no easy matter to strike a just balance between claims of this kind.

Upon the second matter there will be more general agreement. The editor has treated his subject as the history of the county as an entity, and not as an agglomeration

REVIEWS

of histories of parishes and towns. His decision should meet with approval. The history of a tiny area is extremely useful, and in competent hands can be most delightful, but the county historian should select the weightier matters and neglect the smaller details. The history of England is something far beyond the sum total of the history of its component counties, and so the history of a county is something beyond the history of its individual parishes.

The volume opens with an Introduction containing the section on physiography by Mr E. G. Bowen, a section on the dialects to prove that we are really in Wales, and one on the boundaries by the Editor. The County as it exists is the result of the legislation of 1536 and 1542 but that represents the end of a long period of growth. The eastern portion is the ancient Welsh Kingdom of Ystrad Tywi (with the exception of Gower) but the western portion has been carved out of the old kingdom of Dyfed. The town of Carmarthen stood on the borders of the two kingdoms, but the Normans, on excellent strategic grounds, selected it as the central site of their invasion, and the county gradually expanded from the town. The castle was royal (not marcher) and after being termed an 'honour' and a 'casteltry' the area subject to its jurisdiction was called a county after 1241. By the statute of Rhuddlan in 1284 it was assimilated to the new counties of North Wales and acquired a sheriff. Its development is therefore different from the palatine lordships of Pembroke and Glamorgan on its west and east.

The development of the boundaries is an exceedingly interesting illustration of the relations of upland and lowland peoples to one another within the same area. Carmarthen was successively a Roman fort and a Norman centre, and the county spread outwards from it. Nevertheless the outward boundaries of the County so formed are still for the most part those of ancient tribal divisions. They are river boundaries, natural and appropriate to an upland people, but hardly ever adopted by lowlanders. The exception is the western boundary, which seems to be the result of arrangements made late in the Middle Ages.

The chapter on prehistoric and Roman times is (with one exception) the product of past and present members of the staff of the National Museum of Wales, and is a worthy monument to the work of that great institution. It is quite certain that twenty years ago it could not have been written with anything approaching such precision and fullness. The subject is treated on the widest lines and the local developments correlated with the general European movements, and their distributions explained. The dolmens, for instance, are all of the western type and their distribution points to the existence of a traffic route from Carmarthen Bay to the northern coast of Pembrokeshire to avoid the storm-tossed headlands of St. Davids. In the Bronze Age this route becomes clear, and the small number of Beaker people also came across the sea from Somerset or Devon. The whole development has that continuity which Sir Cyril Fox has proved is so characteristic of a highland region.

There follows a masterly chapter by Sir John Lloyd on the age of the native princes. It is a confused and varying story, for the most part of local repercussions of the relations between Wales and England in general. It certainly does not suffer from lack of incident, but it is difficult to disentangle and difficult to memorize. In the skilled hands of Sir John Lloyd it attains order and coherence, and his chapter is invaluable for the history of Carmarthenshire, but will also (now that the *History of Wales* is out of print) be found of great utility for the general history of medieval Wales.

The succeeding chapter on the later Middle Ages (1282-1536) is not nearly so successful, but the author had to face great difficulties. As he says 'the sources available

ANTIQUITY

for a study of Carmarthenshire after the Conquest are limited in type and quantity, and but few have been edited'. The chronicles have ceased, and even a comparatively poor chronicle is far better than none at all. Consequently the author has to describe the organization of the County interspersed with such pieces of historical information as he could find, and if the resulting picture lacks finish it is due to the defects of the authorities and not of the author.

The volume ends with an admirable chapter by Mr A. J. Richard on the castles, boroughs, and religious houses. A better choice could not have been made because Mr Richard possesses in an unusual degree the knowledge of the historian and the archaeologist. He is at home in medieval documents and has also conducted excavations, so we are given a combination of archaeology and history that could hardly be bettered.

Finally there are three features that give distinction to the volume. The first is the admirable series of maps. They are all based upon the plain Ordnance Survey map (scale 4 miles to the inch) and upon it are plotted in the manner of an overprint the features characteristic of the various periods. The result is to make comparison easy and inferences certain. Behind the archaeological and historical writing are keen geographical minds.

The second feature, not always found in books of local history, is the excellence of the writing. Perhaps it is invidious to mention names when all is so good, but Sir John Lloyd, as everyone knows, is master of an admirable historical style, and Dr Mortimer Wheeler writes with a distinction rare among archaeologists. He can succeed in making even an excavation report readable.

Thirdly the publishers are to be congratulated heartily upon the production. The format will stand comparison with the issues of many of the private presses that specialize in the printing of beautiful books, and the binding is a real binding—not the 'casing' that usually has to do duty for it. It is a marvellous volume at the price, probably only rendered possible through the generosity of the subscribers.

H. J. RANDALL.

GAMLE GÅRDSANLEGG I ROGALAND (Fortsettelse). By JAN PETERSEN.
Oslo : Instituttet for sammenlignende Kulturforskning, 1936. pp. 100 and 65 plates.
15 N. kr.

The study of the domestic life and economy of our prehistoric forerunners by minutely examining their houses and fields has been a feature of post-war archaeology in other lands than Britain. In Norway the new orientation of research has been most successfully represented by Dr Jan Petersen, Director of the Stavanger Museum. The relatively level, granitic coasts of Rogaland must have been one of the least sparsely settled districts of Norway even in the Stone and Bronze Ages, judging by the wealth of the Stavanger Museum in relics from those periods. But it is only from the early centuries of our era that complete farms have so far been identified. Dr Petersen was first led to his successful search for their ruins by a study of old farm-names, and in 1933 published a first account of his researches. The present volume is a continuation and describes (in Norwegian, with adequate German résumé) new, and in some respects different, structures.

On the tiny island of Utsira, lying right out in the North Sea, were no less than ten ancient steadings, about half going back to the *Völkerwanderungszeit*. These are all

REVIEWS

quite small (say 8.5 m. $\times$ 3.5 m.), one-roomed, rectangular cabins with sometimes an enclosed plot attached. As in all the Rogaland houses, the walls were built of small boulders, but posts, sometimes standing in recognizable sockets, at others resting on flat flags, helped to support the roofs. The latter were covered with birch-bark as in modern Norwegian farms: charred remains of the bark were discovered both on Utsira and at other sites. In one of these minute island farmsteads it was evident that bog-iron had been smelted—a vivid sidelight on the primitive economics of the Migration Period.

Earlier, and even more interesting, are the farms at Lyngaland, visited by members of the International Prehistoric Congress last August. On an open heath the congressists saw not only the foundations of two big farmhouses, but also the ruined dykes enclosing the attached fields. The moor is dotted too with circular heaps of stones—91 have been planned—exactly like the 'small cairns' on Scottish and Yorkshire moors. In his book Dr Petersen admits that most may have been funerary, though he found nothing in two that he excavated. Prof. Hatt, however, argues that the majority are not burial places at all, but just heaps of stones, cleared off the fields. The steadings themselves lie side by side with a narrow yard between them, from which leads a 'hollow way'—really a fenced cattle-track—at first very narrow, but widening like a funnel towards the moorland pastures.

One house was 62 m. long over all and divided into five rooms 5 to 6 m. wide, the other 28.5 m. long by 3 to 4.5 m. wide but undivided. Thresholds and hearths, paved and cobbled areas, are now easily recognizable, but it must have required very close observation to distinguish such from the general chaos of fallen stones and the naked rock that outcrops here and there. These large houses both go back to about A.D. 400.

Five houses at Havødl seem to be about a century older. They are the remains of a regularly planned village, such as can be seen, more complete, at three other sites not yet scientifically excavated. In all, the small rectangular houses are grouped radially round a circular or oval space with a barrow in its centre.

Thanks to the author's magnificent photographs, accompanied by an exhaustive but concise explanatory text and detailed plans, those who have not had the privilege of viewing the terrain, should be able to visualize both the ruins and their setting: the photograph of the cattle-track at Lyngaland is a model example of the treatment of a difficult subject. Air-photographs, having been taken in unsuitable lighting, do not help much, save for one view of the oval village of 'Dysjane' in Klepp. The architecture here described is strikingly different from anything known in prehistoric Britain. But the environment out of which it grew is so similar to that of our Highland Zone that the methods employed for its revelation give a lesson applicable to British excavation. And, after all, these Norwegian house-types, rather than the Atlantic-Celtic courtyard houses, are the ancestors of those still surviving in the West Highlands.

The excavations here described were not designed to fill museum cases or to gratify collectors. And in fact relics were few and unimpressive but in most cases sufficient to date the sites. Tracked stones have parallels in Scotland and North Ireland, and pots with milled rims from Lyngaland may be compared with some recently described from Antrim. At Lyngaland and in several other farms well-worked flints, including even a 'Garnes point', were found. Petersen explains them as remains of Stone Age visitants, but my own experience suggests that the manufacture of flint implements was not arrested by the coming of iron.

V. G. CHILDE.

ANTIQUITY

LES PEINTURES RUPESTRES SCHEMATIQUES DE LA PÉNINSULE IBERIQUE. By L'ABBÉ HENRI BREUIL. Vol. III, Morena, pp. 125, 59 plates. Vol. IV, Sud-est et est de l'Espagne, pp. 166, 45 plates. Paris: Imprimerie Lagny, 1933 and 1935.*

In these two splendid volumes the Abbé Breuil gives a complete account of a large series of rock-surface paintings, usually in red paint, which almost entirely belong to the Eneolithic period of Spanish prehistory. In one case the paintings actually overlie Palaeolithic naturalistic painting, which at least certifies their later date. But the general character of the paintings is totally different from anything Palaeolithic. Rigid formalization of human and animal figures, purely geometrical designs and actual representations of men holding bridled animals, all indicate a time long after the last fine Palaeolithic artistic period. The Abbé makes comparison, rightly, with the patterns on cylinder-idols and dolmen-stones of Spain and Portugal and on artifacts of the same period. He points out that the places where the paintings occur are not near habitation-sites, and that they are in consequence probably religious centres. Some of the symbols and signs painted on the rocks 'ne sont pas encore de l'écriture, mais y conduisent'. For they are certainly indications intended to convey information to others. Possibly the painted rocks were in fact centres for the distribution of information concerning travelling, hunting and the like. The plates and photographs of the paintings and scenery are magnificent. But the paintings themselves are totally devoid of artistic import.

THE ANCIENT BURIAL-MOUNDS OF ENGLAND. By L. V. GRINSELL. Methuen, 1936. pp. 240, 24 plates, 11 plans and diagrams. 12s 6d.

This is a kind of barrow-guide, and it is one that will be read and used by many readers of ANTIQUITY. There is no book covering the same ground—indeed, with the exception of a few specialized works of limited scope, there is nothing,† so far as I am aware, which deals exclusively with barrows except Thurnam's famous articles in *Archaeologia*. Mr Grinsell writes for open-air people, giving abundant practical directions about inns, roads, views and distances. His style is rather ragged but his obvious enthusiasm for barrows redeems many shortcomings. When every criticism has been made, it remains a fact that the author knows a great deal about his subject, that he has visited many barrows and discovered many new ones, and that his knowledge is that of the serious student who has earned his right to a hearing by hard work and research. The illustrations are almost all good, and though some of them are on the small side they are on the whole adequate. More plans and sketch-maps, however, would have been welcome. Our growing debt to Major Allen for his incomparable air-photographs is once again apparent, and full use has been made of the Ordnance Survey collection of R.A.F. air-photographs, one of which adorns the dust-cover.

The first part of the book (pp. 13–104) deals with the history of barrow-study, type and chronology, burial customs past and present, folk-lore, local names, maps, field-work,

* We apologize to author, publisher and our readers for not having long ago published a review of the first two volumes of this important work. In spite of repeated efforts, we have been unable to obtain the review from the person to whom we sent it (with another book) on 16 August 1934.—EDITOR.

† Except of course Greenwell's account of his looting-expeditions—one of the most tedious books ever written.

REVIEWS

excavation. The last item is written admittedly with limited knowledge and experience and its inclusion does not add much to the value of the book. The diagram on p. 15 does not bring out what we believe to be an important characteristic of long barrows (both stone and earthen)—that their original shape was often if not always, that of a quadrilateral with the two longer sides slightly converging towards the western end. Weathering has generally obscured this feature, and many of the older plans are inaccurate in this respect. Several earthen long barrows, when seen from the air, appear strikingly rectangular. The facts about true and false passage-grave barrows are correctly stated, but the explanation given (p. 14) of the change from 'true' to 'false' is new and not altogether convincing. We commend the author for the foot-note on p. 23, distinguishing 'an expression of his own personal opinion' from opinions which have gained general acceptance. Neither is necessarily correct, but there is a difference, and it is most important, especially in a book like this, to call attention to that difference. It is said that the fine air-photograph of a cluster of Saxon grave-mounds on Derrington-Downs, Kent (plate v) is the last record of them in a perfect state. Would any other country allow the graves of its ancestors to be obliterated by the builder? Reference should be made to the fine group on Barham Down and to others (now vanished) at Dinton, Bucks, and on Walton Bridge Green, Middlesex. The alleged long barrow at Southampton called Bevis' Mount is more likely to have been a Castle Mound; I know of no evidence that it was long, but it was destroyed in the nineteenth century and no adequate description of it has survived. A reference might have been made on page 47 to the opening of New Grange tumulus by the Northmen. The capstone of the Whispering Knights (p. 51) has long since disappeared; the burial-chamber is represented without one in the earliest illustration (by Stukeley). (Actually Stukeley's illustration is inconsistent with the text; I pin my faith rather on the former). We suggest that the 'coty' in Kits Coty House is to be connected with the term *coit* so often applied to burial-chambers, rather than with OE *cot* (p. 58). Mill-barrow southeast of Winchester is spelt *maelan beorh* in a charter of A.D. 961 (Birch, *Cart. Sax.* III, 1077); we are tempted to associate it with Mæglā, the companion of Port and Bieda, who are said in the Saxon Chronicle to have landed at Portsmouth, 17 miles to the southeast, in A.D. 501. Whatever its origin, the name cannot be connected with a windmill. The reference to Cwichelmes hlæw (p. 102) occurs not in a charter but in the Saxon Chronical (sub anno 1006), though the identification is not above suspicion (the form Scutchamer Knob suggests an early form *scuccan mere*, the devil's pond). A *Cwichelmes hlæw* in the bounds of Ardley, Oxon (Kemble, *Cod. Dip.* 1289, 10th c.) must refer to another barrow of the same name. The mound of Lanyon Quoit (p. 108) is in my opinion certainly long. Mention should be made of the huge long barrow called Woolley barrow (parish of Morwenstow, Cornwall, 2 NW), first recognized by Major Bushe-Fox, who told me of it. There is another twenty miles to the south at Hendra-burnick (parish of Davidstow, Cornwall, 10 SE), with cup-marks on the capstone.

The rest of the book is arranged topographically and consists of a detailed description of barrows in selected regions. The author is obviously more at home in the south of England than in the north, and Cumbrians and Northumbrians will perhaps consider that their barrows and cairns (including those with cup-and-ring marks) deserved some notice. A 'new and greatly enlarged edition', which we hope will be demanded, should redress the balance. The descriptions of excavations are numerous, if rather monotonous, but should be disinterred from the obscurity of provincial transactions. A few observations may be recorded here.

ANTIQUITY

The meaning of Boscawen-un is surely the down (*un*, also spelt *goon*, as in Goon-hilly) belonging to the place Boscawen (p. 120). I believe the circle on Beacon Hill, Mendip, to be modern. The Priddy Circles are of quite a different character from those at Thornborough (p. 124). The last book mentioned on p. 125 does not deserve an asterisk. The biggest barrow at Knowlton, Dorset, is shown by air-photographs to be a *bell* barrow, not a bowl (p. 135). A long barrow near the Long Stones, Avebury ('Neolithic Wessex', no. 18) is omitted on the sketch-map on p. 149; only the southeast end can now be seen, but Stukeley records it. Some of the long barrows south of Avebury had oolite in their construction (e.g. the West Kennet long barrow, no. 27 on the map of 'Neolithic Wessex'; see p. 151). The observation on the abundance of long barrows and scarcity of disc-barrows round Avebury is an important point (p. 152). Mention should have been made of those curious small round barrows with sarsen peristaliths (such as the Pennings and Winterdene circles). On the derivation of the place-name Marlborough (p. 152), if the mound in the college grounds was primarily a Castle Mound, it can hardly have given its name to the place, as it ought not to be earlier than the Norman Conquest. The cists in the Aylesford Sand Company's pit (p. 179) were probably of the Bronze Age, for a flat bronze axe and two bronze knife-daggers were found in an adjacent grave (*Proc. Soc. Ant. Lond.*, ser. 2, xvii, 376). We commend the discreet reference to the King Stone long barrow at Rollright (pp. 188-9) which we still firmly believe to be a long barrow in spite of the digging there! There are certainly *two* stone barrows, one in and one just outside the copse near the Cross Hands Inn (p. 190). On p. 196 Samuel Lysons (1763-1819) is confused with his nephew Canon Samuel Lysons (1806-77), the spoliator of Rodmarton and Ablington barrows, the opening of which is described in *Our British Ancestors* (1865). The description of Arbor Low (p. 200) should take into account Mr Stuart Piggott's remarks in *Arch. Journ.* 1931, LXXXVIII, 155-6. 'Woad' is different from 'red ochre' (p. 201). 'Gorseddau' is awkwardly divided and the hyphen omitted between pp. 202 and 203; the word occurs in a quotation, but 'gorseddau' is itself a plural form. We should like to know more about the alleged human face carved on the wooden coffin-lid of an interment at Gristhorpe (p. 212). We have not seen the original in the Scarborough Museum. Has it been published? The definitions of 'neolithic' and 'ring mound' (p. 224) could be improved.

All these remarks are criticisms of details. So far they may be justified; that is to say, so far as they represent errors and omissions, they indicate a certain carelessness and lack of finish. On the other hand none of them is of a kind to mislead the reader on matters of principle, or even of general importance. The book is refreshingly free from unsupported speculation; it represents, on the whole, the opinions of competent students, and the author's private opinions are not obtruded. He has plenty of time to improve it, and we hope he will do so. Meanwhile, with these reservations, we heartily commend it to those in search of knowledge. O.G.S.C.

The review of volume 4 of *The Palace of Minos at Knossos* in the September number contained the following errors (which were not due to the Reviewer).

p. 366, line 9, 'Toronto' *for* Toronto; p. 367, 34, 'Tirqus' *for* Tiryns; 44 'in' *for* a; p. 368, line 30 '211' *for* 21; 31 'building' *for* blocking; 33 'Zuchetto', *for* 'zuchetto'; 34 '522' *for* 552.

Index

- Aberlady, cross, 64, 68, 70
 Aberlemno, cross-slab (*illus.*), 437-8
 Abingdon abbey, 308
 Abusir, iron pickaxe, 8, 9
 Abydos (Abydos), analysis of iron, 356, 357
 Iron objects, 8, 9, 22, 23
 Meteorite, 6
 Adadnirari IV, 20
 Addison, F., 293
 Aden (Adem), 300
 Adukrom, 469
 Aegisthus, tomb (*plan*), 412, 413
 Africa (East), Arabian settlement, 291
 Africa (North), plough in, 274
 Sheep, 200
 Agate beads (*illus.*), 292-305
 Taunton castle museum, 292
 Description and treatment, 296-8
 Export, 298-9
 Mines, 301, 302
 Varieties, 296, 302
 Agga, king of Kish, 106
 Agriculture, diffusion, 261-2
 Implements, 261-3
 Religious ceremonies, 265
 See also FIELDS
 Ahnighito, meteorite, 5
 Air-photographs :—
 Barrows, Deadman's Hill, 96 (IV)
 Bassianae, 460 (VI)
 Catern's grave, 460 (VII)
 Crop-circles, Ogbourne St. George, 352 (II)
 Erbil, 136
 Reculver, 192 (I)
 Slate quarries, Stonesfield, 96 (II)
 South Kudiwan, 96 (VII-VIII)
 Air-surveys, 362
 Akhenaton, (Akhenaten) 18, 77
 Akkadian map (*illus.*), 223-6
 Alasiya, 14
 Alberta, clearance of land, 328-9, 332
 Alesia, Roman camp, 104
 Alice Holt, forest, 324
 Allen, G. W. G., 510
 Alphabet, Phoenician, 89
 Als, clinker-built boat, 342
 Al 'Ubaid, 138
 Pictorial frieze, 142
 Amasis, 23
 Amenhotep III, 18
 America (North), early man, 494
 Amphora handles, 106
 Anchor Hill, Crowland, 99
 ANDRAE, WALTER ; Uruk (*illus.*), 133-45
 ANGLO-SAXON :—
 Cemetery, Linton Heath, 41
 Columns, Reculver, 184
 History, 234-7
 Remains, Reculver, 180
 Sceattas, 106
 Sculpture, British Museum, 3, 61
 Vine-scroll ornament (*illus.*), 61-71
 Anittash, Hittite king, 14, 17
 Anthony (saint), 434, 435, 438
 Anthropoid skull, Sterkfontein, 480
 Anthropology, history, 247-8
 ANTIQUITY, its founding, 385-90
 Antum, 135
 Anu, shrine, 135
 Aqueducts, 401
 Arabia, antiquities, 246
 Castles, 101
 Sheep, 202
 Archaeological photography (*illus.*), 351-2, 486-90
 Surveys, 131-2, 362
Archaeological Review, 385
 Architecture, Romanesque, 250-2
 Sumer, 138, 139
 Argolis, 405
 Argos, 415, 416
 ARKELL, A. J. ; Cambay and the bead trade (*illus.*), 292-305
 Arlon, Belgo-Roman tombs, 480
 Arrowhead, Avebury, 422, 424
 Art history, 146-53
 Scythian (*illus.*), 149-53
 Artemidorus, 144
 Arthur's (king) round table, 481
 Ashmolean museum, *see* OXFORD
 Asia Minor, iron worked, 11, 14, 16, 17, 23
 Plough, 270
 Asshur, Ishtar temple, 20
 Asshurbanipal, 21, 22
 Assurnazirpal, 20
 Assur, 135

ANTIQUITY

- Atalaya, caves, 86
 Aubrey, John, 419
 Augustus, mausoleum, 46
 Austin, Roland, 385, 386
 Roland G., 195
 Autun, mausoleum, 46
 Avebury, beaker ware (*illus.*), 422, 423
 Beckhampton avenue, 417
 Excavations (*illus.*), 417-27
 Table of finds, 427
 Axe-hammers, preselite, 221
 Axes, found at Avebury, 422, 424
 Presely stone (*illus.*), 220-1
 Babylon, 133, 135
 Babylonia, 398
 Maps (*illus.*), 223-6
 Plough, 267-8
 Bacubirito, meteorite, 5
 -baec, suffix, 492
 Balfour, Henry, 295
 Bambandianalo, excavations, 287-91
 Bamouna painting; criticism, 2, 3
 Banat, grain-pit (*illus.*), 27
 Baneasa, storage-pit (*illus.*), 31
 Bantry stone, 435
 Barbosa, D., 299, 300, 301
 Barley, early records, 277, 278
 Barlowe, G. W., 480
 Barns, Köln-Lindenthal (*illus.*), 90-2
 Barrows, 510-12
 Belgium (*illus.*), 42-4
 Coin-dating, 41
 Cutteslowe, 99
 Inhumation burial, 41, 42
 Opened by St. Patrick, 479
 Roman (*illus.*), 37-53
 List of, 48-53
 Sandon (*air-ph.*), 96-7
 Size, 38
 Bartlow Hills, barrows, 38, 41, 42, 44
 Barton, barrow, 42
 Barzel, name for iron, 23
 Barzillai, meaning, 20
 Basel, storage-pits, 30
 Bassa, priest, 182
 Basset, Richard, 308
 Bassianae (*air-ph.*), 475-7
 Battely (archdeacon), 191
- Beads :—
 Arab trade-names, 294
 Copenhagen museum, 227
 Iron, 7
 Notgrove barrow, 227
 Trade in Sudan (*illus.*), 292-305
 Transvaal, 282, 284, 286, 288, 289, 290
 Beaker burials, Avebury, 422, 424
 Bealin cross, 438
 Beck, H. C., 292, 293, 304, 305
 Bede, Venerable, 161
 Bedstead, Og's, 20
 Belgium, barrows (*illus.*), 42-4, 47
 Bell, Gertrude, 132
 Bellows, William, 386
 BENTON, SYLVIA; Votive offering to
 Odysseus, 350
 Berkshire, pannage dues (*map*), 314, 315
 Betasii, tribe, 190
 Bewcastle cross, 64, 66, 67, 68, 70, 385
 (*plate*), 436
 Bia (iron), 11, 12, 13, 18, 23
 Birds on pottery, 228
 Biscop, Benedict, 186, 485
 BISHOP, C. W.; Origin and diffusion of the
 traction-plough (*illus.*), 261-81
 Bitumen, 103
 Blackmore forest, 324, 493
 Blanchard, M., 479, 480
 Boat, Roman (*illus.*), 468
 Boats, clinker-built (*illus.*), 341-5
 Boghaz-Keui, Hittite archives, 14, 17
 Bohemia, 117-18
 Bohuslän, rock-drawings (*illus.*), 276
 Bois de Buis, barrows, 43
 Book of MacRegol (*illus.*), 436
 Books received, 108, 256
 Boundaries, continuity, 340
 Bourne, Arms Hills barrow, 41
 Bracelet, iron, 22
 Bracton, Henry, 159
 Bradwell church, 182, 184
 BRAUNHOLZ, H. J.; Archaeology in the Gold
 Coast (*illus.*), 469-74
 Braydon forest, 313
 Breuil, Abbé, 175, 176, 177
 Brick-work, Uruk, 138, 139, 141, 144
 Britain, plough, 274

INDEX

- British Museum, 131
 Anglo-Saxon sculpture, 3, 61
 Hieratic papyri, 369-71
 Meteorites, 5
 BROGAN, O., and N. LUCAS-SHADWELL ;
 Gergovia (*illus.*), 210-17
 Brönsted, A., 63, 68, 69
 Bronze, discovery of, 87-8
 Age, Europe, 240-2
 Dagger-hilt, 7, 8
 Bronzes, Bartlow Hill barrow, 41
 Chinese, 371-3
 Brunanburh, battle, 494
 Buddhist manuscripts, 362
 Bull-dog, Inca (*illus.*), 358-9
 Burial, Cap Blanc, 209
 Guernsey, 115-17
 Mound, 48
 Pasirik, 148, 151, 152
 Ritual, 38, 40, 41
 Secondary, 41
 Burkitt, M. C., 178, 358
 Burwell castle (*plans*), 465-8
 BUTTLER, W. ; Neolithic village of Köln-
 Lindenthal (*illus.*), 89-93
 Pits and pit-dwellings in Southeast
 Europe (*illus.*), 25-36
 Burzahom, excavations, 483
 Byblus, excavations, 88
 Byzantium, 65
 Cabasa, stone of Seth, 6
 Cadastral plans, 132
 Caesar, Julius, 210
 Cair Gloiu, 493
 Cair Gunnion, 105
 Calleva, Roman name, 494
 Calshot, place-name, 493
 Cambay, bead trade (*illus.*), 292-305
 Camerton, skeleton (*illus.*), 486
 Camps, in France, 102
 Canaanite, early form, 89
 Canterbury, barrow, 42
 Missionary churches, 183
 St. Martin's church, 184
 Cap Blanc, rock-shelter (*illus.*), 207-9
 Capital, communal, 394-5
 Carchemish, destruction, 20
 Cardiff, National museum, 452
 Carmarthenshire, 506-7
 Carnelian beads (*illus.*), 293-305
 Carolingian art, 113
 Ivory (*illus.*), 64 (VI A), 70
 Casas Grandes, sacred meteorite, 7
 Cassandria, sacred meteorite, 6
 Castell, James, 187
 Castor ware (*illus.*), 94-6
 Castle, South Kudiwan (*air-ph.*), 101
 Castle Dore, excavations, 105
 Cataonia, 16
 Catern's Grave (*air-ph.*), 477-8
 Caton-Thompson, G., 287, 291
 Caves, Crimea, 243-5
 Cemetery, Byblus, 88
 Carchemish, 20
 Ford, 191
 Mapungubwe, 285-6
 Mycenae (*illus.*), 405-14
 Cerne, giant of, 95
 Chaddleshworth, 308, 309
 Chagar Bazar, 102, 446
 Chalybes, iron-workers, 16, 23
 CHAPMAN, D. E., and ALEXANDER KEILLER ;
 Rock shelter at Cap Blanc (*illus.*), 207-9
 Chariots, iron, 20
 Chester-Beatty papyri, 369-71
 Chesterton, barrow, 38
 Chichester, 111-12
 Childe, V. G., 365, 391, 392, 394, 395, 402,
 China, agricultural implements, 278 [404
 Bronzes, 371-3
 Use of plough, 264, 278-9
 Chisels, iron, 18
 Chronology, Egypt, 233
 Factor in excavation, 137
 Chupaderos, meteorite, 5
 Chysauster, 163, 164
 Cinema-photography, 217-20
 Circles, Overton Hill, 417, 419
 Cities, growth, 393, 396
 Civilization, progress, 391-404
 Clapham, A. W., 63, 72, 183, 185
 Clark, Grahame, 488
 Class society, 399, 400, 402, 403
 Classis Britannica, 191
 Clay, R. C. C., 385
 Clay-nail mosaic (*illus.*), 139, 140, 141

ANTIQUITY

- Clay-pits (*illus.*), 26, 27
 Clob walls, 170
 Clothall, lynchets, 327
 Cobbett, William, 326, 330
 Cnossus, *see* KNOSSOS
 Coenwulf, 182
 Coins, evidence for dating barrows, 41
 Collard, Allington, 187
 Collingwood, R. G., 190, 260
 Columella, 206
 Copenhagen, national museum, 227-9
 Copper, Sumer, 104-5
 Coptic art (*illus.*), 66-7
 Corbridge, 256
 Cormelian, giant, 171
 Cornwall, field-walls (*illus.*), 162-74
 Woodland in 1086 (*map*), 319, 320, 321
 Cortil-Noirmont, barrow, 43, 47
 Crafts, invention, 392-4
 Crawford, O. G. S., 37, 187, 194, 202, 220, 223, 385
 Archaeological photography (*illus.*), 351-2
 Deadman's Hill, Sandon (*air-ph.*), 96-7
 Discovery of bronze, 87-8
 Frontier-dyke, Melrose (*illus.*), 346-9
 Human progress ; a review, 391-404
 Notes on the founding of ANTIQUITY, 385-90
 Red-burnished pottery, 87-8
 The work of Giants (*illus.*), 162-74
 Cremation burials, 38, 40, 41
 Crete, art, 504-6
 Civilization, 366-8
 Images on bronze plates, 104
 Plough, 270, 271
 Crimea, caves, 243-5
 Crop-sites, records (*illus.*), 349
 CROSSES :—
 Bewcastle, 64, 66-8, 70, 385 (plate), 436
 Hillborough, 184, 186
 Reculver (*illus.*), 184, 185, 186
 Rothbury (*illus.*), 433
 Sculptured, 2
 Vine-scroll ornament (*illus.*), 61-71
 Cross-slabs, Scotland (*illus.*), 428-40
 Cruck building, 452
 Crunzian (Crunzie), spelling, 105
 Cult-buildings, 138, 139
 Culture, diffusion, 1-3
 Cumberland, King Arthur's round table, 481
 Long-house, 456
 Sand-hill settlement, 233
 Cunobelin, 45
 Curle, A. T., 100-1
 Current comments, 227-33
 Cutteslowe, barrow, 99
 Cyprus, antiquities, 118
 Iron ornaments, 21
 Daedalus, 505
 Daggers, iron, 18
 Dahshur, iron tools, 8, 9
 Danevirke, 228
 Danube valley, use of the plough, 272, 276
 Daphnae, 22
 David, representations of, 429-32, 435-6
 Davington priory, 179
 Déchelette's manual, 498-501
 Decimal notation, 401
 Defennah, 23
 Delphi, stone of Cronus, 6
 Demons, protection from (*illus.*), 475
 Desch, Cecil H., 7, 357
 Desforges, Emile, 210
 Devon, woodland in 1086 (*map*), 318, 320
 Dhu Marmar, castle, 101
 Diffusion of culture, 1-3
 Digging-stick, 262
 DINES, H. G. ; Stonesfield slate-tips, 93-4
 Distribution maps :—
 Roman barrows, 40
 Royal forests, 323
 Traction-plough, 263
 Woodland, in Domesday, 313, 315, 317-21
 DOBSON, D. P. ; Roman boat (*illus.*), 468
 Doliche, god of, 18, 23
 Dolorite, Presely, 220-1
 Domesday Survey, 308
 Woodland (*distribution maps*), 306-24
 Dorian art, 504-6
 Dorset, woodland in 1086 (*map*), 316, 318
 Dover church, 182
 Dowker, George, 191
 Drenthe, Celtic fields, 229
 DUNNING (G. C.), and R.F. JESSUP ; Roman barrows (*illus.*), 37-53
 Dura, temple, 144

INDEX

- Durham, Acca's cross, 70
Dushratta (king), 17, 18
Eadbald (king), 182
Eadberht, king of Kent, 182
Eadred, king of Kent, 182
Earthworks :—
 Cornwall, 173, 174
 Danevirke, 228
 Frontier-dyke, Melrose (*illus.*), 346-9
 Gergovia (*illus.*), 210-17
 Giant's Grave, Cornwall, 173, 174
Easby cross (*illus.*), 70
Easter Island (*illus.*), 54-60, 364
Ebner, Dr, 32
Editorial notes, 1-4, 129-32, 257-60, 385-90
Edward the Confessor, 192
Egberht, king of Kent, 180
Egypt, excavations, 77-85
 Essay-prize, 478
 Hieratic papyri, 369-71
 Iron in, 7, 8, 22, 23, 356, 357
 Plough (*illus.*), 268-71
 Sheep, 199, 200
 Urban cities, 398
Emery, W. B., 230
Emesa, sacred meteorite, 6
Erbil (*air-ph.*), 136
Erech (Uruk), 133-45, 396
Eridu, 133
Erosion, Reculver, 186-8
Errata, 512
Eshunna, 133
Eskimos, use of iron, 7
Esnah, iron objects, 8
Essex, archaeological survey, 119-20
 Place-names, 114
Estate-maps, 132
Ethelbert, king of Kent, 182
Europe, historical geography, 497-8
 Sheep-breeding, 202-4
Evans, Sir Arthur, 104, 129, 385
Ewart, Cossar, 358
EXCAVATIONS :—
 Editorial notes, 129-30
 Methods, 249-50
 Stratification in, 136, 137
 Avebury (*illus.*), 417-27
 Bambandianalo, 287-91
EXCAVATIONS, *continued* :—
 Bassianae, 476-7
 Burzahom, 483
 Byblus, 88
 Castle Dore, 105
 Chagar Bazar, Syria, 102
 Egypt, 77-85
 Gaza, 380
 Gergovia (*illus.*), 210-17
 Gold Coast, 469-74
 Gorse Bigbury, 481
 Hembury fort, 98
 Karanis, 83-5
 Kildonald (Kildonan) fort, 364-5
 Köln-Lindenthal (*illus.*), 89-93, 502-4
 Mapungubwe, 282-91
 Medinet Habu, 81-3
 Nuzi, 494-5
 Polis Bay, Ithaca, 350
 Rahoy fort, 365
 Rogaland, 508-9
 St. Albans, 103
 Tell Agrab, Iraq, 482
 Tell-Arpachiyah, 378-9
 Tell el Amarna, 77-80
 Tepe Gawra, 441-7
 Termez, 483
 Troy, 361-2
 Uruk, 135-45
 U.S.S.R., 242-4
 Welney, 95-6
Fahan Mura, 434
Fair, M. C., 488
Farm labourer, skill of, 325
Featherstone, place-name, 493
Fellâta, bead-merchants, 292, 293
Fens, excavations, 94-6
FIELD, HENRY ; Horns and skulls on build-
 ings (*illus.*), 223
Fields, crooked, 325-40
Field-systems, 164, 167-8, 170, 325-40
Field-walls, construction (*illus.*), 162-74
Films, history, 485
 Illustrating prehistory, 217-20
Finger-rings, iron, 21
Fire-making, primitive, 99-100
Firth, Cecil, 230
Fishing lugger (*illus.*), 341-5

ANTIQUITY

- Flint, fire-making, 99-100
 Industry, Avebury, 426
 Foot-plough, 262
 Forbes, R. J., 103
 Ford, cemetery, 191
 Forests, in 1086, 312
 Royal, Wessex (*map*), 323-4
 Forsdyke, E. J., 361
 Forts :—
 Hembury, 98
 Kildonald (Kildonan), 364-5
 Megiddo, 376
 Rahoy, 365
 Reculver (*illus.*), 188-92
 Fouché, Leo, 282, 284, 288
 Fox, Sir Cyril, 37
 France, camps, 102
 Frances, abbess of Davington, 179
 Isabel, sister of, 179
 French Academy, 484
 Frontier-dyke, Melrose (*illus.*), 346-9
 Fullbrook-Leggatt, L., 486
 Gadd, C. J., 16
 Gambier Islands, 56
 Gardner, Elinor, 287
 Guy, 287, 288, 290
 Gareus, temple, 144
 Gaul, road-system, 109-10, 498-501
 Gaza, excavations, 380
 Gebel Ahmar (Cairo), thunderbolt, 12
 Genlade river, 192
 Gerar, use of iron, 19
 Gergovia (*illus.*), 210-17
 Gerzah, iron beads, 7
 Gezer, iron found, 19
 Ghassoulian culture, 238
 Giants in Cornwall, 171-2
 Work of (*illus.*), 162-74
 Gilgamesh, 106, 135, 145, 430
 Giza, excavations, 129
 GLANVILLE, S. R. K.; Recent excavations
 in Egypt, 77-85
 Glass ware in barrows, 41
 Glasshouse sites, 501-2
 Industry, 501-2
 Glimes, barrow, 47
 Gloucester, Celtic name, 493
 Godmanchester, barrow, 38
 Godwin (earl), 192
 Gold Coast, archaeology (*illus.*), 469-74
 Gold work, Scythia (*illus.*), 149-52
 Ornaments, Towednack, 166
 Goliath, 20
 Gomme, G. L., 385
 Gonner, E. C. K., 339
 Goran, earthwork, 174
 Gorsey Bigbury, excavations, 481
 Gotland, antiquities, 375
 Gradina (Bassianae), 475-7
 Grain impressions on sherds, 228
 Grain-pits (*illus.*), 27
 Grand Canary, pottery, 86-7
 Graurheindorf, storage-pits, 30
 Grave-slab, Barra, photograph, 488 (III)
 Gray, H. St. G., 425
 GRBIC, M., Bassianae (*air-ph.*), 475-7
 Great Berkhamstead, castle, 466
 Greece, iron finger-rings, 21
 Plough (*illus.*), 264, 272, 273
 Griffith, F. Ll., 304
 Guernsey, Déhus burial-mound, 115-117
 Gundestrup cauldron (*illus.*), 430
 Guthlac (saint), 99
 Gyges of Lydia, 20, 22
 Haa-ab-ra, 23
 Habitation-pits, Köln-Lindenthal (*illus.*), 90
 Hadramaut, ruined castle (*air-ph.*), 101
 Hadrian (emperor), 186
 Hag, woodland term, 330
 Halbert, iron, 22
 Halsnö, clinker-built boat, 342
 Ham Hill, beads found, 292
 Hamilton, James, 295
 Hammurabi, 398
 Hampshire, pannage dues (*map*), 313, 314
 Harden, D. B., 292
 Harold (king), 192
 Harrison, William, 326
 Haverfield, F. P., 258, 260
 Hawkes, C. F. C., 44, 212
 Early iron in Egypt, 355-7
 Headache, cure for, 98
 Hedges, 336, 337
 Helmet, bronze, 22
 Iron, 21
 of Drajna (*illus.*), 98

INDEX

- Hembury fort, 98
 Hemp, W. J., 72
 Henderson (C.), 166
 Henry, Mlle., 61
 Herkheim, storage-pits, 29
Heroon, Greek, 382
 Herstal, barrow, 43
 Hexham, slab, 70
 Hieratic papyri, British Museum, 369-71
 Hill, Thomas, surveyor, 187, 188
 HILZHEIMER, MAX; Inca bull-dog, 358-9
 Sheep (*illus.*), 195-206
 Soay sheep, 359-60
 Hill-fort, Castle Dore, 105
 Cornwall, 171
 Hippocentaur, 438
 Hippopotamus, remains at Qau, 13
 Hippo-sandals, 48
 History films, 485
 Revolutions, 392-404
 Hittite archives, Boghaz-Keui, 14
 Hoards :—
 Tell Asmar, 7
 Toud, 483
 Towednack, 166
 Holborough, barrow, 37
 Holdsworth, Sir William, 159
 Home, Gordon, 190, 192
 Homer, 380-2
 Homs (Tripolis), pit-dwelling, 32
 Horne, Ethelbert, 486, 488
 HORNELL, JAMES; Evolution of the clinker-built fishing lugger (*illus.*), 341-5
 Horns fixed to trees, etc., 97-8, 223, 475
 Horse, rock-sculptures (*illus.*), 208-9
 Horus, light-god, 12, 22
 Hottomont, barrow, 47
 Houses, Welsh (*illus.*), 448-59
 Human progress, 391-404
 Human remains :—
 Avebury, 422, 424
 Byblus, 88
 Mapungubwe, 286
 Moscow-Volga canal, 481
 Sahara, 482
 St. Germain-la-Rivière, 480
 Sterkfontein, Transvaal, 480
 Swanscombe, 480-1
 Hungary, pits and pit-dwellings (*illus.*), 26-36
 Hungus, Pictish king, 439
 Hunt, Robert, 171
 Hunza, wheel-barrow (*illus.*), 464-5
 Hurstbourne Tarrant, barrow, 45
 Ibx horns, protection from evil, 97, 223, 475
 Ideographs, chinese, 278, 279
 Ilkley, incised stone, 436
 Implements, preselite, 221
 Russia, 243-5
 India, civilization, 399
 Plough (*illus.*), 277
 Indians (Ohio), use of iron, 7
 Industries, beginnings, 392-4
 Inhumation, double, 59
 Barrows, 41, 42
 Inkpen, place-name, 494
 Innin-Ishtar, goddess, 143, 145
 Iona, 439, 440
 Iraq, air-survey, 362
 British School of Archaeology, 132
 Ireland, W. H., 179, 180
 Ireland, long-house in, 456
 Prehistoric man, 125-7
 Iron, 5-24
 Egyptian name, 13
 Foundry, Megiddo, 19
 Smelting, 356-7, 401
 Use in Egypt, 355-7
 Used as foundation deposits, 23
 Iron Age cemetery, 20
 Palestine, 24
 Irton, incised stone, 436
 Ishtar, 143, 145
 Italy, plough, 272
 Javan (Ionia), 16
 Jedburgh, carved slab (*illus.*), 64, 67
 Jemdet Nasr, pictorial frieze, 142
 Jerusalem, mosaics of the Dome of the Rocks (*illus.*), 67, 68
 JESSUP, R. F.; Reculver (*illus.*), 179-94
 See also DUNNING (G. C.)
 Jones, Felix, 132
 Neville, 4, 285, 287
 Jordan, J., 135
 L. A., 177
 Junner, N. R., 469, 472
 Jupiter Dolichenus, 18, 19

ANTIQUITY

- Kanesh, 17
 Karaindash, Kassite king, 143
 Karanis, excavations, 83-5
 Keftiu, metal-work, 16, 17
 KEILLER, A., and S. PIGGOTT; Recent excavations at Avebury (*illus.*), 417-27
 Axes, Presely stone (*illus.*), 220-1
 See also CHAPMAN (D. E.)
 Kelekesh (Cilicians), 19
 Kells, monastery, 440
 Kendrick, T. D., 61
 Kenyon, Kathleen, 47
 Keyne (saint), 493
 Kezweden, iron stores, 19
 Khabalkinu, 18
 Khorassan, tin-deposits, 87-8
 Khorsabad, iron-store, 21
 Kiik Koba, Crimea, 243
 Kildalton, carved stone, 440
 Kildonald (Kildonan) fort, 364-5
 Kingship, 398
 Kirkuk, 136
 Kish, 106, 133
 KITZINGER, ERNST, 433
 Anglo-Saxon vine-scroll ornament, 61-71
 Kizzuwadna, 16, 17, 18, 19, 23
 Knives, iron, 22
 Knossos, iron recorded, 13
 Roman building, 233
 Palace of Minos, 366-8
 Knowledge, 399-400
 Koldewey, Robert, 135, 136
 Köln-Lindenthal, excavations, 502-4
 Neolithic village (*illus.*), 25, 89-93
 Storage-pits, 29
 Kotaj (Hungary), storage-pit, 28
 Pit-stables (*illus.*), 34, 35
 Kudiwan (South), castle (*air-ph.*), 100
 Ladle Hill, fort, 465
 Lagash, 133
 Lalanne, Gaston, 207
 Lambarde, William, 180, 186
 Land, clearance of (*diagrams*), 328-40
 Inclosure, 338-40
 Langsdorff, A., 138
 Larsa, 133
 LAVACHERY, HENRI; Easter Island, 54-60
 Laval, Honoré, 56
 Law and archaeology, 154-61
 Codes, 157, 158, 159
 League, extent, 309, 310
 Leicester, Roman wall, 484
 Leland, John, 184, 185, 191
 Lenin, 400
 Lestrade, G. P., 285
 Letcombe Basset, 308
 Lethbridge, T. C., 466
 Letopolis, thunderbolt city, 11
 Lexden, barrow, 45
 Libya, rock-painting (*illus.*), 175-8
 Limodra (Limadura), 301
 Lindisfarne Gospels, 3, 63, 434, 435, 437
 Linton Heath, barrow, 41
 Livett, G. M., 185, 194
 Ljubic, S., 476, 477
 Loftus, W. K., 135
 Lo-Lang, 376
 London, 122
 Museum, 373-5
 Museums and galleries, 107
 Saxon, 373-5
 LORIMER, E. O.; Wheel-barrow, Hunza, 464
 Lothar, king of Kent, 182
 LOWE, C. VAN RIET, 485
 Mapungubwe, 282-91
 LUCAS-SHADWELL (N.), see BROGAN (O.)
 Luggar, clinker-built (*illus.*), 341-5
 Lukki (Lycians), 19
 Lunulae, gold, 228
 Lyminge church, 184
 Lynch, H. B., 132
 Lynchets, Avebury, 426
 Clothall, 327
 Cornwall, 163
 Lyngaland, farms, 509
 Lysons, Samuel, antiquary, 512
 Samuel (canon), 512
 McEuen, R. E., 175
 MacIver, Randall, 291
 Mafut, horns on graves (*illus.*), 475
 Magdalenian deposit, Cap Blanc, 207
 Magna Carta, 159
 Maine, Sir H. S., 155, 156, 157
 Maitland, F. W., 159, 310
 Maké Maké, god, 57, 59
 Malan, D. E., 284, 286

INDEX

- Malinowski, B., 155
MALLOWAN, M. E. L., 102, 103
 Tepe Gawra, 441-7
Man, in England, 121
 Prehistoric, in Ireland, 125-7
 Progress of, 391-404
Manchuria, plough, 280
Mandeville, Geoffrey de, 465, 466
Mannson, Peder, 502
MAPS AND PLANS :—
 Argolis, 407
 Babylonian (*illus.*), 223-6
 Castallack, Cornwall, 169
 Fields, Zennor, 165
 Frontier-dyke, Melrose, 347
 Geology, southwest England, 311
 Gergovia, 211, 212, 213, 215
 Giant's Grave, Cornwall, 173
 Mesopotamia, 134
 Reculver, c. 1630, 189
 Towednack, Cornwall, 167
 See also DISTRIBUTION-MAPS; PLANS
Mapungubwe, 4, 282-91
Marshall, William, 339
Marx (Karl), 402, 404
Mason, M. H., 175
Maspero, Sir G., 8, 9
Maurata, Pascuan king, 56
Mawnan church, 166
Maximian, ivory throne, 63
Mecca, sacred meteorite, 6
Medinet Habu, temple, 81-3
MEEK, T. J.; Babylonian maps (*illus.*), 223-6
Megalithic burial in Guernsey, 115-16
Megaliths, Palestine, 237-8
 Research, 257
Megiddo, 376-7
 Iron foundry, 19
Menes, king of Egypt, 398
-mere, meaning, 492
Merino sheep, 206
Mesopotamia, antiquities, 132
 Iron, 9, 11, 23
 Map, 134
 Monuments, 383-4
 Plough (*illus.*), 265, 266
 Sheepbreeding, 199, 201-2
Meteorites (*illus.*), 5-7, 23
Métraux, A., 54
Meux, Sir Henry, 425
Milchet wood, 308
Miletus, wool-trade, 205
Millet, 261
Minet el Beida, Minoan burial, 18
Mishrifé-Qatna, iron objects, 17
Mitanni, iron worked, 17, 18
Mohenjo-daro, size of, 396
 Agate beads, 293
Monks Sherborne, value of woodland, 309
Monuments, archaeological surveys, 131-2
 Guides, 255, 256
Moose-yards, 103
MORGAN, F. W.; Domesday woodland in
 southwest England (*maps*), 306-24
 Lewis, 404
Mortar, prehistoric, 170
Morton, John, archbishop, 193
Morton's Leam dyke, 193
Mother and Son cult, Crete, 104
Motunui, 57
MOWBRAY, CECIL; Eastern influence on
 carvings at St. Andrews and Nigg,
 Scotland (*illus.*), 428-440
Mulfra Quoit, Cornwall, 168
Musasir, 16
Museums, Copenhagen, 227-9
 London, 107, 373-5
Mycenae (*illus.*), 405-16
Myres, J. N. L., 99
Nabis, 416
Naharain, 17
Naqabal-Hajar, castle, 101
Nationalism, meaning, 363
Naukratis, 22
Nebeshah, 23
Nebi Yunus (Nineveh), 136
Necho I, 22
Negretti sheep, 206
Neolithic village, Köln-Lindenthal, 89-93
Newman, R. N. H., 175
Nickel in meteoric iron, 7
Nigg, cross-slab (*illus.*), 434-40
Nineveh, iron helmets, 21
Nippur, 133
Njoya (sultan), 353
NOTES & NEWS, 86-98, 207-26, 346-60, 460-78

ANTIQUITY

- Notgrove barrow, 227
 Nubia, iron spearhead (*illus.*), 8, 9-11
 Numismatic Congress, 99
 Nuzi, Akkadian map (*illus.*), 223-6
 Excavations, 494
 Nydam boat, 342, 468
 Oak-trees, size, 338
 Odysseus, votive offering, 350
 Office of works, 129
 Og, bedstead of iron, 20
 Öland, houses, 456-7
 Omdurman, 304
 Orchoë, 133, 135
 Ordnance Survey, 132
 ORGILL, W. L. ; The rabbit in England, 462-3
 Ornament, vine-scroll (*illus.*), 61-71
 Orongo, 57
 Osiris, 264
 Oslo, prehistoric congress, 222-3
 Otley, cross-shaft, 69
 Overton Hill, stone circles, 417, 419
 Ovifak, meteorites, 5
 Oxford, Ashmolean museum, 131, 303
 Pitt-Rivers museum, 131, 295, 304
 Paestum, temple-metope, 104
 Palestine, archaeological survey, 131
 Iron age, 24
 Iron working, 19, 20
 Megaliths, 237-8
 Pannage dues (*distribution maps*), 314, 315
 Papyrology, 130-1
 Partington's *Chemistry*, extract from, 87
 Parzillu, name for iron, 13, 14, 20, 23
 Pascuans, 55, 56, 57, 58, 59, 60
 Pasirik, burial, 148, 151, 152
 Patrick (saint), 479
 Paul (saint), 434, 435
 Pease, Sir Alfred, 358
 PEATE, IORWERTH C. ; Some Welsh Houses (*illus.*), 448-59
 Peers, Sir Charles, 182, 184, 185, 186
 Peet, Professor, 230
 Peking man, food, 105
 Peloponnese, art, 504-6
 Penteville, barrow, 43-4, 47
 Persepolis, 138
 Perseus (shrine), 416
 Pessinus, sacred meteorite, 6
 Peter IV, of Aragon, 206
 Petrie, Sir Flinders, 9, 10, 13, 132
 PHILLIPS, C. W. ; Burwell castle (*plan*), 465-8
 Castor ware (*illus.*), 94-6
 Phoenician alphabet, 89
 Photography, air and ground (*illus.*), 349
 Archaeological (*illus.*), 351-2, 486-90
 Pictographs, Uruk, 136, 137, 142
 PIGGOTT, STUART, 95, 221, 465
 Potsdherd from Stonehenge ditch (*illus.*), 221-2
 See also KEILLER (A.)
 Pigments, ingredients, 177, 178
 Piltdown, geological horizon, 481
 Pins, iron, 22
 Pits and pit-dwellings (*illus.*), 25-36
 PITTIONI, N. ; Cinema-photography and prehistory, 217-20
 Pitt-Rivers, A. H., 131
 Pitt-Rivers museum, *see* Oxford
 Place-names, England, 491-4
 Essex, 114
 PLANS (*see also* MAPS)
 Barrows, Stevenage, 39
 Burwell castle, 467
 Grave-circle, Mycenae, 411
 Houses, Welsh, 449, 451, 453, 455
 Mycenae, 409
 Pits and pit-dwellings, 27-30, 33-5
 Reculver church, 181
 Stoneholes, Avebury, 421
 Tomb of Aegisthus, Mycenae, 413
 Trench-system, Gold Coast, 470
 West Kennet avenue, Avebury, 418
 Plataea, 415, 416
 Plenderleith, H. J., 356-7
 Plough, found in peat, 227
 Ideographs, 278, 279
 Origin and diffusion (*illus.*), 261-81
 Rock-drawings (*illus.*), 272-3, 276
 Use in England, 326
 Polis Bay, shrine, 350
 Pollock, Sir Frederick, 159
 Polycrates of Samos, 205
 Ponds, in charters, 492
 Post-holes, 30

INDEX

POTTERY :—

- Beaker ware, Avebury (*illus.*), 422, 423
- Bronze Age sherd, Avebury, 424, 425
- Burzahom, 483
- Byblus, 88
- Castor ware (*illus.*), 94-6
- Danubian, chronology, 504
- Gergovia, 213, 216
- Gold Coast (*illus.*), 471-4
- Neolithic, of China, 146, 147
- Neolithic bowl, Holdenhurst, 481
- Niedermendig lava, 422
- Potsherds with impressions of grain, 228
- Ratfyn, 222
- Red-burnished ware, Grand Canary, 86-7
- Rhitsona, 238-9
- Samian, found in barrows, 41
- Stonehenge (*illus.*), 221-2
- Syrian-Iraqi region, 102-3
- Tepe Gawra, 446-7
- Tripoly, 377
- Yortan ware, 361
- Prehistoric congress, Oslo, 222-3
- Prehistory, films, 217-20
- Prescelly, *see* PRESELY
- Preselite, term for rock, 462
- Presely dolorite, 220-1
 - Implements, 221
 - Name, 460-2
- Prestige, diffusion, 2
- Preusser, C., 135
- Progress, human, 401-4
- Psametik, king of Assyria, 22, 23
- Pyramid (Great), iron found, 8, 9
- Qau, remains of hippopotamus, 13
- Quadesh, 17, 19
- Quarentine (measure), 309
- Rabbits in England, 364, 462-3
- Race problems, 112-13
- Racial elements, 362, 363
 - Migration, 146-53
- Radford, C. A. R., 105
- Rahoy, vitrified fort, 365
- Rákosszaba, pit-dwellings (*illus.*), 32, 33
- Ram of Ammon (*illus.*), 199
- Ramsey abbey, 465
- RANDALL, H. J. ; Law and Archaeology, 154-61

- Rat, story of (*illus.*), 353-5
- Ratfyn, pottery, 222
- Ravenna, ivory throne, 63
 - Vine scroll, 65
- RECENT BOOKS, 106-8, 365
- RECENT EVENTS, 99-105, 361-5, 479-85
- Reculver (*illus.*), 179-94
 - Church, 179-86
 - Cross (*illus.*), 184, 185-6
 - Maps (*illus.*), 187
 - Monastery, 179, 182
 - Roman fort (*illus.*), 188-92, 479
 - Sea-walls, 194
- Regional names, England, 101-2
- Regulbium (Reculver), 179
- Relief, limestone, New York, 66
- Renders, Adam, 291
- Research, editorial notes, 257-8
- REVIEWS, 109-28, 234-56, 366-84, 491-512
- Revolutions in history, 392-404
- Rewa Kantha, agate mines, 301
- Rhitsona, pottery, 238-9
- RICE, D. TALBOT ; Art History as a key to
 - Racial Migration (*illus.*), 146-53
- Richborough, barrow, 42
 - Fort, 190
- Rickard, T. A., 9, 356
- Rio, P. M. del ; Native customs, 97-8
- Rivet, Paul, 54
- Road, Reculver-Canterbury, 191
 - Roman system, Kent, 191
 - System, Gaul, 498-501
- Rochester, St. Andrew's church, 183
- Rock-drawings, Bohuslän (*illus.*), 276
 - Engraving (*illus.*), 488 (II)
 - Paintings, Libya (*illus.*), 175-8
 - Spain, 510
 - Sculptures (*illus.*), 207-9
 - Shelter, Cap Blanc (*illus.*), 207-9
- Rocks, fire-and-water process for destroying (*illus.*), 419, 426
- ROE, F. G. ; The 'Crooked Field' (*diagrams*), 325-40
- Rogaland, farms, 508-9
- Rogers, Thorold, 325
- ROMAN :—
 - Barrows (*illus.*), 37-53
 - Boat (*illus.*), 468

ANTIQUITY

ROMAN, *continued*:—

- Building, Knossos, 233
- Camps, Alesia, 104
- Cemetery, St. Albans, 103
- Coins, Gergovia, 216
 - in barrows, 41, 43, 44
 - Karanis, 85
- Empire, 123-5
- Fort, Bradwell, 182
 - Reculver (*illus.*), 179, 188-92
- Harbour, Reculver, 192
- Inscriptions, *corpus*, 260
- Remains, Gergovia, 213, 214
- Road-system, Kent, 191
- Temple, Gergovia (*plan*), 214-16
- Theatre, Verulamium, 47
- Wall, Leicester, 484
- Romanesque architecture, 250-2
- Rome, 120
 - Aqueducts, 127-8
 - Emperors, 122-3
 - Road-system, 191, 499-501
- Ross, Sir Denison, 362
- Rostovtzev (M.), 149, 150
- Rothbury cross (*illus.*), 69, 433
- Rougham, barrow, 41, 42
- Roumania, pits and pit-dwellings, 28-9, 36
- Round, J. H., 310
- Roundago, term, 168
- Rubbish-pits (*illus.*), 26, 27
- Rug Park, barrow, 45
- Russia, archaeology, 242-5
- Ruthwell cross, 64, 66, 67, 68, 70, 186, 436
- Sahara, human remains, Old Stone Age, 482
- St. Albans, Roman cemetery, 103
- St. Andrews, cross-slabs (*illus.*), 428-40
- St. Germain-la-Rivière, burial, 480
- Sakkara, store-chambers in tomb, 230-1
- Salisbury museum, Presely axe, 221
- Sandon, Deadman's Hill, 96-7
- SANTA-OLALLA, J. M. ; Cyclopean walls at Tarragona (*illus.*), 72-6
- Saqqarah, iron found, 8
- Sarcophagus, St. Andrews, 428-40
 - Theodore (archbishop), (*illus.*), 64
 - Theodota (*illus.*), 64
- Sardis, wool-trade, 205
- Sargon, 16, 20, 21, 24
- Sarran, barrow, 44-5
- Sarre, bridge, 193
 - Wall, Kent, 193
- Sarsen stones, 418
- Sarton, George, 400
- Sassanian art (*illus.*), 431, 432
- Saxl, Fritz, 61
- Scare-crows, 223
- Schaeffer, F. A., 45
- Schliemann, H., 406, 409, 416
- Schofield, J. F., 4, 285, 287, 290
- Schuchhardt (C.), 417
- Scotland, cross-slabs (*illus.*), 428-40
- Script from Byblus, 89
- Scroll ornament (*illus.*), 61-71
- Sculpture, Anglo-Saxon, 3
 - Images on bronze plates, 104
- Scythia, art (*illus.*), 149-53
- Seal-pictures, 142
- Seleucia, iron workers, 16
 - Stamped and inscribed objects, 106
- Semitic script, Byblus, 89
- Senior, Elizabeth, 61
- Sennacherib, 20
- Sennar, foundation, 305
- Seth (Setesh), storm-god, 12, 13
- Shabwah, horns on mosque (*illus.*), 475
- Shadwell, N. L., 44
- Shalmaneser III, 20
- SHAW, W. B. K. ; Rock paintings in the Libyan Desert (*illus.*), 175-8
- Sheep (*illus.*), 195-206, 358
 - Soay (*illus.*), 204, 205, 359-60
- Sickle, iron, 22
- Silchester, Christian church, 183
 - Place-name, 494
- Sinanthropus*, food of, 105
- Sinjirli, 135
- Sisera, 20
- Sixpenny Handley, place-name, 494
- Skull, anthropoid, Sterkfontein, 480
 - Java, 364
 - Moscow-Volga canal, 481
 - Swanscombe, 481
- Skulls on buildings (*illus.*), 223
- Soay sheep (*illus.*), 204, 205, 359-60
- Somaliland, antiquities, 100-1
- Somerset, woodland (*map*), 316, 319

INDEX

- Sonning, value of woodland, 309
 Southampton, place-name, 492
 South Newton, woodland rights, 308
 Spain, plough, 274
 Rock-paintings, 510
 Spearhead, copper, Tarkhan, 10
 Dervish, 11
 Goliath's, 20
 Iron (*illus.*), 8, 9-11
 Speiser, E. A., 441, 447
 Spital, cross, 70
 Stanojević, St., 477
 Stein, Sir Aurel, 362, 482
 Stephen (king), 465
 Sterkfontein, anthropoid skull, 480
 Stevenage, Six Hills (*illus.*), 38, 39
 Stevens, Frank, 222
 Stewart, James R., 361
 Stonehenge, Bronze Age pottery (*illus.*), 221-2
 Date of ditch, 222
 Stonesfield slate-tips (*illus.*), 93-4
 Storage-pits (*illus.*), 26-31
 Strutt, Mrs, 175
 G. A., 175
 Stukeley, William, 417, 419
 Stutzheim, storage-pits, 29
 Sudan, bead trade, 292-305
 Sumer art, cultural elements, 362-3
 Cities, 133, 398
 Civilization, 106
 Cult-buildings, 138, 139
 Invention of writing, 397
 Plough (*illus.*), 264, 266
 Sun-language, 484
 Sussex, county history, 110-12
 Sweden, plough, 276
 Swords, iron, 21, 22, 23
 Syria, 88-9
 Iron working, 17-19
 Pottery, 102-3
 Szemet Gödör, pit-dwelling, 33, 34
 Rubbish pits (*illus.*), 26, 27
 Tabal, 17
 Metal-work, 16
 Tabal-Tubal, iron workers, 23
 Taggata, 14
 Tarkhan, copper spearhead, 10
 Tarragona, walls (*illus.*), 72-6
 Tarshish (Tarsus), iron exported, 16
 Tebarani, 16
 Tell Arpachiyah, excavations, 378-9
 Tell Asmar, bronze dagger hilt, 7, 8
 Pottery, 446
 Tell el Amarna, excavations, 77-81
 Temple-metope, Paestum, 104
 Tepe Gawra, 441-7
 Termez, excavations, 483
 Terracotta, Ithaca, 350
 Myrina, 248
 Terramare people, 272
 Tethmosy (Thothmes) III, 16, 17, 19
 Thanet, map, 193
 Thebes, stone of Amun, 6
 Iron tools, 22
 Theodore (archbishop), 63, 186
 Sarcophagus (*illus.*), 64
 Theodota, sarcophagus (*illus.*), 64
 Thomas, Sir D. Lleufer, 452
 H. H., 220
 Thorneycroft, W., 365
 Thothmes (Tethmosy III), 16, 17, 19
 Thruxton, place-name, 493
 Thunderbolts, 6, 12, 13, 23
 Tibar, mountain, 16
 Tibet, plough in, 280
 Tiglath-Pileser I, 20
 Tiglath-Pileser III, 20
 Tinay, 17
 Tin-deposits, Khorassan, 87-8
 Tirlemont, barrow, 43
 Tom, giant-killer, 171, 172
 TOMBS :—
 Aegisthus (*plan*), 412, 413
 Altar-tomb, St. Andrews, 428-40
 Belgo-Roman, Arlon, 480
 Clytemnestra, Mycenae, 414
 Dating, newspaper, 231-2
 Lo-lang, Teihakuri, 376
 Magdalenian, St. Germain-la-Rivière, 479-80
 Mycenae (*illus.*), 406, 412-13
 Sakkara, 230-1
 Tholos, 75, 406, 409
 Toms, H. S., 492
 Tonder, J. W. van, 285, 287, 288

ANTIQUITY

- Tools, iron, 22
Toud, silver hoard, 483
Traction-plough (*illus.*), 261-81
Traesager, wooden plough, 227
Transjordan, air-survey, 362
Transvaal, excavations, 282-91
Trench-systems, Gold Coast (*illus.*), 469, 470, 472
Treryn, giant of, 171
Trier, Roman tombs, 46
Trigg, place-name, 493
Tripoly, pottery, 377
Tritton, A. S., 101
Tromp, Felix, 284
Troy, excavations, 361-2
 Fall of, 415
Tubal-Cain, 16
Tunip, 17
Turkestan, 362
Tutankhamûn, dagger (*illus.*), 18
Tyle (platform), meaning, 457
Tylor, Edward B., 131, 157
Tyre, iron imported, 16
 Sacred meteorite, 6
Unger, Edward, 223, 224, 226
Un-ra, high priest, 11
Ur, 129, 133, 266
 Agate bead, 292
 Copper objects, 104-5
 Fragments of iron, 7, 8
 Mosaic standard (*illus.*), 201-2
Ur-Nammu, 143
Urban communities, 393, 396, 399
Uri, 304, 305
Uruk (*illus.*), 133-45
 Neolithic villages, 396
 Pictographs, 136, 137, 142
 Rulers, 145
 Temples, 133, 135, 139, 140, 142, 143, 144, 446
U.S.S.R., excavations, 242-4
Utsira, 508
Valtcele, storage-pits (*illus.*), 29
Varia, 479-85
Varthema, Ludovica, 299
Vegetation, prehistoric times, 306-7
Vercingetorix, 210
Verulamium, Roman theatre, 47
Vetasii, tribe, 190
Vinca, 119
WACE, A. J. B.; Mycenae (*illus.*), 405-16
WAINWRIGHT, G. A., 355, 356
 The coming of Iron (*illus.*), 5-24
Wales, house-types (*illus.*), 448-59
Wall-building and decoration, 140
Wallachia, grain-pits, 27
Walle, traction-plough, 275
Walls, construction of field (*illus.*), 162-74
Wantsum river, 191-4
Warka, *see* URUK
Washerne, woodland rights, 308
Watelin (M.), 54
Water-system, Megiddo, 376-7
Wearmouth monastery, 485
Welney, castor ware (*illus.*), 94-6
Wessex, royal forests (*map*), 323, 324
West Mersea, barrow, 40, 46
Wheat, early records, 277, 278
Wheel-barrows (*illus.*), 463-5
Wheeler (R. E. M.), 37
Wild, R. P., 469
WILLIAMS, IFOR, 457
 'Presely', 460-2
Wiltshire, woodland in 1086, 315-17
Winchelsey, Robert, archbishop of Canterbury, 184
Windsbatch, place-name, 492
Woodhenge, 221
Woodland, Domesday (*distribution maps*), 306-24
 Value in terms of swine, 309
Woolley, Sir Leonard, 7, 129, 292, 362
Woolmer forest, 324
Writing, invention, 397
 Pictograph, 141, 142
Yortan ware, 361
Zamfara, bead-trade, 295
Zengövarkony, pit-dwellings, 36
Zigurrats, Uruk, 139, 140
Zimbabwe, 289, 290, 291
Zotz, L., 217

INDEX

Reviews of Books

	PAGE
Åberg (Nils). <i>Bronzezeitliche und Früheisenzeitliche Chronologie</i> - - -	240
Alford (V.) and R. Gallop. <i>Traditional Dance</i> - - -	107
Ashby (T.). <i>Aqueducts of Ancient Rome</i> - - -	127
Badè (W. F.) <i>Manual of Excavation in the Near East.</i> - - -	249
Birley (Eric). <i>Corbridge Roman Station (Corstopitum)</i> - - -	256
Boak (A. E. R.) <i>Karanis</i> - - -	77
Breasted (J. H.) <i>Ancient Times</i> - - -	252
Breuil (H.) <i>Les Peintures Rupestres Schematiques de la Péninsule Iberique</i> - -	510
Burr (D.) <i>Terracottas from Myrina</i> - - -	248
Buttler (W.) and W. Haberer. <i>Die Bandkeramische Ansiedlung bei Köln-Lindenthal</i>	502
Childe (V. G.) <i>Man Makes Himself</i> - - -	391
Clapham (A. W.) <i>Romanesque Architecture in Western Europe</i> - - -	250
Cohen-Portheim (P.) <i>Spirit of London</i> - - -	122
Collum (V. C. C.) <i>Déhus Chambered Mound at Paradis, Vale, Guernsey</i> - -	115
Contenau (G.) <i>Monuments Mesopotamiens</i> - - -	383
Cox (J. C.) and C. B. Ford. <i>Parish Churches of England</i> - - -	121
Crossley (F. H.) <i>The English Abbey</i> - - -	245
Cyprus : <i>Department of Antiquities, report no. 2, 1934</i> - - -	118
Diamond (A. S.). <i>Primitive Law</i> - - -	156
East (G.) <i>Historical Geography of Europe</i> - - -	497
Ekwall (E.) <i>Concise Oxford Dictionary of English Place-names</i> - - -	491
Evans (Sir Arthur). <i>Palace of Minos at Knossos</i> - - -	366
Fewkes (V. J.) <i>Interpretation and Dating of the Site of Belo Brdo at Vinča in Yugoslavia</i> - - -	119
Frankfort (H.) and J. D. S. Pendlebury. <i>City of Akhenaten</i> - - -	77
Franz (L.). <i>Beiträge zur Vor- und Frühgeschichte Böhmens</i> - - -	117
Gardiner (A. H.) <i>Hieratic Papyri in the British Museum</i> - - -	369
Gore (Rt. Hon. W. O.) <i>Regional Guides to Ancient Monuments</i> - - -	255
Grinsell (L. V.) <i>Ancient Burial-Mounds of England</i> - - -	510
<i>Handbook of Travel.</i> (Harvard Travellers Club). - - -	384
Hinks (Roger). <i>Carolingian Art</i> - - -	113
<i>History of Carmarthenshire.</i> Edited by Sir John E. Lloyd - - -	506
Hodgkin (R. H.) <i>History of the Anglo-Saxons</i> - - -	234
Hölscher (Uvo). <i>Excavations at Ancient Thebes</i> - - -	77
Howard (E. B.) <i>Evidence of Early Man in North America</i> - - -	495
Huxley (J. S.), A. C. Haddon and A. M. Carr-Saunders. <i>We Europeans</i> - -	112
<i>In Memoria Lui Vasile Pârvan</i> - - -	108
<i>International Conference of the Association on the Study of the Quaternary Period in Europe</i> - - -	242
<i>Istros, 1934</i> - - -	248
Jenkins (R. J. H.) <i>Dedolica</i> - - -	504
<i>Kratkiy Otchet o Rabote Akademiy</i> - - -	378
Lamon (R. S.) <i>Megiddo Water System</i> - - -	376
<i>Legacy of England</i> - - -	245
Lindsay (J.) <i>The Romans</i> - - -	120

ANTIQUITY

	PAGE
Mallowan (M. E. L.) and J. C. Rose. <i>Prehistoric Assyria</i> - - - -	378
<i>Manuel d'archéologie Préhistorique Celtique et Gallo-Romaine</i> Joseph Déchelette -	498
Marsh (F. B.) <i>History of the Roman World</i> - - - - -	124
Martin (C. P.) <i>Prehistoric Man in Ireland</i> - - - - -	125
Massingham (H. J.) <i>Through the Wilderness</i> - - - - -	118
Meek (T. J.) <i>Excavations at Nuzi</i> - - - - -	494
Moss (H. St. L. B.) <i>Birth of the Middle Ages</i> - - - - -	382
Nerman (B.) <i>Die Volkerwanderungszeit Gotlands</i> - - - - -	375
<i>Nineteen Echoes and a Song</i> - - - - -	107
Oba (T.) and K. Kayamoto. <i>Lo-Lang : the Tomb of Wang Kuang</i> - - -	376
<i>Paleolit SSSR.</i> - - - - -	242
Passek (T.) <i>La Céramique Tripolienne</i> - - - - -	377
Penniman (T. K.) <i>Hundred Years of Anthropology</i> - - - - -	247
Petersen (J.) <i>Gamle Gårdsanlegg i Rogaland</i> (Fortsettelse) - - - -	508
Petrie (Sir F.) <i>Ancient Gaza IV</i> - - - - -	380
Piggott (S.) <i>Progress of Early Man</i> - - - - -	121
Pollitt (W.) <i>Archaeology of Rochford Hundred and Southeast Essex</i> - -	119
Poulsen (E. and others) <i>Das Heroon von Kalydon</i> - - - - -	382
Priestley (J. B. and others). <i>Beauty of Britain</i> - - - - -	122
Rathjens (C.) and H. v. Wissmann. <i>Vorislamische Altertüemer</i> - - -	246
— <i>Landeskundliche Ergebnisse</i> - - - - -	246
Reaney (P. H.) <i>Place-names of Essex</i> - - - - -	114
Robson (W. A.) <i>Civilisation and the growth of Law</i> - - - - -	154
Rohden (P. R.) <i>Menschen die Geschichte Machten</i> - - - - -	495
Sauter (F.) <i>Der Römische Kaiserkult bei Martial und Statius</i> - - - -	122
Scullard (H. H.) <i>History of the Roman World, 753 to 146 B.C.</i> - - -	123
Shewan (A.) <i>Homeric Essays</i> - - - - -	380
Speiser (E. A.) <i>Excavations at Tepe Gawra</i> - - - - -	441
Stékélis (M.) <i>Monuments Mégalithiques de Palestine</i> - - - - -	237
<i>Ukazatel Rabot Gosudarstvennoy Akademiy Istoriy Materialnoy Kultury</i> - -	378
Ure (P. N.) <i>Aryballoi and Figurines from Rhitsona in Boeotia</i> - - -	238
Vale (E. F.) <i>Local Colour</i> - - - - -	252
<i>Victoria History of the County of Sussex</i> - - - - -	110
Werner (J.) <i>Münzdatierte Austrasische Grabfunde</i> - - - - -	253
West (L. C.) <i>Roman Gaul, the Objects of Trade</i> - - - - -	109
Wheeler (R. E. M.) <i>London and the Saxons</i> - - - - -	373
Winbolt (S. E.) <i>Wealden Glass</i> - - - - -	501
<i>Yin and Chou Researches</i> - - - - -	371
Zamiatnin (S. I.) <i>Gargarino</i> - - - - -	242
Zinsser (H.) <i>Rats, Lice and History</i> - - - - -	119

Antiquity

A QUARTERLY REVIEW OF ARCHÆOLOGY



Edited by

O. G. S. Crawford, F.S.A., and Roland Austin, F.S.A.

MARCH 1936

	Page
Editorial Notes	I
The Coming of Iron. By G. A. WAINWRIGHT	5
Pits and Pit-dwellings in Southeast Europe. By WERNER BUTTLER	25
Roman Barrows. By G. C. DUNNING and R. F. JESSUP	37
Easter Island, Polynesia. By HENRI LAVACHERY	54
Anglo-Saxon Vine-scroll Ornament. By ERNST KITZINGER	61
The Cyclopean Walls at Tarragona. By J. MARTINEZ SANTA-OLALLA	72
Some recent Excavations in Egypt. By S. R. K. GLANVILLE	77
Notes and News :—	
Modern Red-burnished Pottery in Grand Canary, 86 ; The Discovery of Bronze, 87 ; Syria in the 3rd and 4th Millennia, 88 ; The (Band-Keramik) Neolithic Village of Köln-Lindenthal, 89 ; Stonesfield Slate-tips, 93 ; Castor Ware from the Cambridgeshire Fens, 94 ; Deadman's Hill, Sandon (Herts.), 96 ; Native Customs, 97 ; Hembury Fort, 98 ; The Gold Helmet of Draja, 98	
Recent Events	99
Recent Books and Articles	106
Reviews (<i>for list see overleaf</i>)	109

Published at 24 Parkend Road, Gloucester, England

REVIEWS

	Page
<i>Roman Gaul.</i> By Louis C. West — — — — —	109
<i>Victoria History of the County of Sussex, Volume 3</i> — — — — —	110
<i>We Europeans.</i> By J. S. Huxley, A. C. Haddon and A. M. Carr-Saunders — —	112
<i>Carolingian Art.</i> By Roger Hinks — — — — —	113
<i>Place-names of Essex.</i> By P. H. Reaney — — — — —	114
<i>Re-excavation of the Déhus Chambered Mound at Paradis, Vale, Guernsey</i> — —	115
<i>Beiträge zur Vor- und Frühgeschichte Böhmens.</i> By Leonhard Franz — —	117
<i>Cyprus : Department of Antiquities, report no. 2</i> — — — — —	118
<i>Through the Wilderness.</i> By H. J. Massingham — — — — —	118
<i>Rats, Lice, and History.</i> By Hans Zinsser — — — — —	119
<i>Interpretation and Dating of the Site of Belo Brdo at Vinča in Yugoslavia</i> — —	119
<i>Archaeology of Rochford Hundred and Southeast Essex.</i> By William Pollitt — —	119
<i>How and Why Series : the Romans.</i> By Jack Lindsay — — — — —	120
<i>—Progress of Early Man.</i> By Stuart Piggott — — — — —	121
<i>Parish Churches of England.</i> By J. C. Cox and C. B. Ford — — — — —	121
<i>Spirit of London.</i> By Paul Cohen-Portheim — — — — —	122
<i>Beauty of Britain.</i> By J. B. Priestley and others — — — — —	122
<i>Der Römische Kaiserkult bei Martial und Statius.</i> By Franz Sauter — — — —	122
<i>History of the Roman World from 753 to 146 B.C.</i> By Howard H. Scullard — —	123
<i>History of the Roman World from 146 to 30 B.C.</i> By F. B. Marsh — — — —	124
<i>Prehistoric Man in Ireland.</i> By Cecil P. Martin — — — — —	125
<i>Aqueducts of Ancient Rome.</i> By Thomas Ashby — — — — —	127

EDITORIAL NOTICES

ANTIQUITY is published quarterly on the 1st of March, June, September, and December.

WRITERS wishing for reprints of their articles should apply to 24 Parkend Road, Gloucester.

Reprints cannot be supplied until one month after publication.

THE ANNUAL SUBSCRIPTION (including postage) is ONE POUND sterling. It is payable in advance to ANTIQUITY, 24 Parkend Road, Gloucester, England.

SINGLE COPIES may be obtained direct or through booksellers for 5s. 6d. (post paid). Apply ANTIQUITY, 24 Parkend Road, Gloucester.

MSS (whether in the form of Articles or Notes) offered for publication should be sent to Mr O. G. S. CRAWFORD, Nursling, Southampton, England, and a stamped addressed envelope enclosed. All MSS must be typewritten. Payment is made for Articles only. The EDITORS are not responsible for the opinions expressed by contributors.

BOOKS for REVIEW should be addressed to the EDITOR, Nursling, Southampton.

ADVERTISEMENTS, and all communications relating to them, to be sent to 24 Parkend Road, Gloucester.

Binding Cases for Volume x (nos. 37-40) can be obtained from John Bellows, Gloucester, England, 4s. post free, or if the numbers are sent for binding the inclusive charge is 7s. 6d. Remittance must accompany the order.

Antiquity

A QUARTERLY REVIEW OF ARCHÆOLOGY



Edited by

O. G. S. Crawford, F.S.A., and Roland Austin, F.S.A.

JUNE 1936

	Page
Editorial Notes — — — — —	129
The Story of Uruk. By WALTER ANDRAE — — — — —	133
Art History as a Key to Racial Migration. By D. TALBOT RICE —	146
Law and Archaeology. By H. J. RANDALL — — — — —	154
The Work of Giants. By O. G. S. CRAWFORD — — — — —	162
Rock Paintings in the Libyan Desert. By W. B. KENNEDY SHAW —	175
Reculver. By R. F. JESSUP — — — — —	179
Sheep. By MAX HILZHEIMER — — — — —	194
Notes and News :—	

Rock Shelter at Cap Blanc, 207 ; Gergovia, 210 ; Cinema-photography and Prehistory, 217 ; Axes of Presely Stone from Ireland, 220 ; Potsherd from the Stonehenge Ditch, 221 ; International Prehistoric Congress, Oslo, 222 ; Horns and Skulls on Buildings, 223 ; Orientation of Babylonian Maps, 223

Current Comments — — — — —	227
Reviews (<i>for list see overleaf</i>) — — — — —	234

Published at 24 Parkend Road, Gloucester, England

REVIEWS

	Page
<i>History of the Anglo-Saxons.</i> By R. H. Hodgkin	234
<i>Les Monuments Mégalithiques de Palestine.</i> By Moshé Stékélis	237
<i>Aryballoi and Figurines from Rhitsona in Boeotia.</i> By P. N. Ure	238
<i>Bronzezeitliche und Früheisenzeitliche Chronologie.</i> By Nils Åberg	240
<i>International Conference of the Association on the Study of the Quaternary Period in Europe</i>	242
<i>Paleolit SSSR</i>	242
<i>Gargarino.</i> By S. I. Zamiatnin	242
<i>The Legacy of England.</i> By Adrian Bell and others	245
<i>The English Abbey.</i> By F. H. Crossley	245
<i>Vorislamische Altertümer.</i> By C. Rathjens and H. v. Wissmann	246
<i>Landeskundliche Ergebnisse.</i> By C. Rathjens and H. v. Wissmann	246
<i>Hundred years of Anthropology.</i> By T. K. Penniman	247
<i>Istros, 1934</i>	248
<i>Terracottas from Myrina in the Museum of Fine Arts, Boston.</i> By Dorothy Burr	248
<i>Manual of Excavation in the Near East.</i> By W. F. Badè	249
<i>Romanesque Architecture in Western Europe.</i> By A. W. Clapham	250
<i>Local Colour.</i> By E. F. Vale	252
<i>Ancient Times.</i> By J. H. Breasted	252
<i>Münzdatierte Austrasische Grabfunde.</i> By Joachim Werner	253
<i>Regional Guides to Ancient Monuments</i>	255
<i>Ancient Monuments and Historic Buildings : Corstopitum.</i> By Eric Birley	256

EDITORIAL NOTICES

ANTIQUITY is published quarterly on the 1st of March, June, September, and December.

WRITERS wishing for reprints of their articles should apply to 24 Parkend Road, Gloucester.

Reprints cannot be supplied until one month after publication.

THE ANNUAL SUBSCRIPTION (including postage) is ONE POUND sterling. It is payable in advance to ANTIQUITY, 24 Parkend Road, Gloucester, England.

SINGLE COPIES may be obtained direct or through booksellers for 5s. 6d. (post paid). Apply ANTIQUITY, 24 Parkend Road, Gloucester.

MSS (whether in the form of Articles or Notes) offered for publication should be sent to Mr O. G. S. CRAWFORD, Nursling, Southampton, England, and a stamped addressed envelope enclosed. All MSS must be typewritten. Payment is made for Articles only. The EDITORS are not responsible for the opinions expressed by contributors.

BOOKS for REVIEW should be addressed to the EDITOR, Nursling, Southampton.

ADVERTISEMENTS, and all communications relating to them, to be sent to 24 Parkend Road, Gloucester.

Binding Cases for Volume x (nos. 37-40) can be obtained from John Bellows, Gloucester, England, 4s. post free, or if the numbers are sent for binding the inclusive charge is 7s. 6d. Remittance must accompany the order.

Antiquity

A QUARTERLY REVIEW OF ARCHÆOLOGY



Edited by

O. G. S. Crawford, F.S.A., and Roland Austin, F.S.A.

SEPTEMBER 1936

	Page
Editorial Notes	257
Origin and Early Diffusion of the Traction-plough. By CARL WHITING BISHOP	261
Mapungubwe. By C. VAN RIET LOWE	282
Cambay and the Bead Trade. By A. J. ARKELL	292
Domesday Woodland in Southwest England. By F. W. MORGAN	306
The 'Crooked Field'. By F. G. ROE	325
Evolution of the Clinker-built Fishing Lugger. By JAMES HORNELL	341
Notes and News :—	
Defensive Frontier-dyke near Melrose, 346; Air- and Ground-Photography, 349; A Votive Offering to Odysseus, 350; Archaeological Photography, 351; The Story of the Young Rat, 353; Early Iron in Egypt, 355; Sheep, 358; The Inca Bull-dog, 358; The Soay Sheep, 359	
Recent Events	361
Reviews (<i>for list see overleaf</i>)	366

Published at 24 Parkend Road, Gloucester, England

REVIEWS

	Page
<i>The Palace of Minos at Knossos.</i> By Sir Arthur Evans - - - - -	366
<i>Hieratic Papyri in the British Museum : Chester Beatty Gift.</i> Edited by Alan H. Gardiner	369
<i>Yin and Chou Researches</i> - - - - -	371
<i>London and the Saxons.</i> By R. E. M. Wheeler - - - - -	373
<i>Die Volkerwanderungszeit Gotlands.</i> By Birger Nerman - - - - -	375
<i>Lo-Lang.</i> Vol. II. By T. Oba and K. Kayamoto - - - - -	376
<i>The Megiddo Water System.</i> By Robert S. Lamon - - - - -	376
<i>La Céramique Tripolienne.</i> By T. Passek - - - - -	377
<i>Ukazatel Rabot Gosudarstvennoy Akademiy Istoriy Materialnoy Kultury</i> - - - - -	378
<i>Kratkiy Otchet O Rabote Akademiy</i> - - - - -	378
<i>Prehistoric Assyria.</i> By M. E. L. Mallowan and J. C. Rose - - - - -	378
<i>Ancient Gaza IV.</i> By Flinders Petrie - - - - -	380
<i>Homeric Essays.</i> By Alexander Shewan - - - - -	380
<i>Das Heroon von Kalydon.</i> By E. Poulsen and others - - - - -	382
<i>Birth of the Middle Ages.</i> By H. St. L. B. Moss - - - - -	382
<i>Monuments Mesopotamiens.</i> By G. Contenau - - - - -	383
<i>Handbook of Travel</i> - - - - -	384

EDITORIAL NOTICES

ANTIQUITY is published quarterly on the 1st of March, June, September, and December.

WRITERS wishing for reprints of their articles should apply to 24 Parkend Road, Gloucester.

Reprints cannot be supplied until one month after publication.

THE ANNUAL SUBSCRIPTION (including postage) is ONE POUND sterling. It is payable in advance to ANTIQUITY, 24 Parkend Road, Gloucester, England.

SINGLE COPIES may be obtained direct or through booksellers for 5s. 6d. (post paid). Apply ANTIQUITY, 24 Parkend Road, Gloucester.

MSS (whether in the form of Articles or Notes) offered for publication should be sent to Mr O. G. S. CRAWFORD, Nursling, Southampton, England, and a stamped addressed envelope enclosed. All MSS must be typewritten. Payment is made for Articles only. The EDITORS are not responsible for the opinions expressed by contributors.

BOOKS for REVIEW should be addressed to the EDITOR, Nursling, Southampton.

ADVERTISEMENTS, and all communications relating to them, to be sent to 24 Parkend Road, Gloucester.

Binding Cases for Volume x (nos. 37-40) can be obtained from John Bellows, Gloucester, England, 4s. post free, or if the numbers are sent for binding the inclusive charge is 7s. 6d. Remittance must accompany the order.

Antiquity

A QUARTERLY REVIEW OF ARCHÆOLOGY



Edited by

O. G. S. Crawford, F.S.A., and Roland Austin, F.S.A.

DECEMBER 1936

	Page
Editorial Notes	385
Human Progress ; a review. By O. G. S. CRAWFORD	391
Mycenae. By A. J. B. WACE	405
Recent Excavations at Avebury. By ALEXANDER KEILLER and STUART PIGGOTT	417
Eastern Influence on Carvings at St. Andrews and Nigg, Scotland. By CECIL MOWBRAY	428
Tepe Gawra. By M. E. L. MALLOWAN	441
Some Welsh Houses. By IORWERTH C. PEATE	448
Notes and News :—	
'Presely', 460 ; Introduction of the Rabbit into England, 462 ; Primitive Wheel-barrows, 463 ; Burwell Castle, 465 ; A Roman Boat, 468 ; Archaeology in the Gold Coast, 469 ; Protection against Demons, 475 ; Bassianae, 475 ; Catern's Grave, 477 ; Essay on Egypt, 478.	
Varia	479
Archaeological Photography	486
Reviews (<i>for list see overleaf</i>)	491
Title-page, Contents, and Index to Volume X	

Published at 24 Parkend Road, Gloucester, England

REVIEWS

	Page
<i>Concise Oxford Dictionary of English Place-Names.</i> By Eilert Ekwall - - -	491
<i>Excavations at Nuzi</i> , volume III. By T. J. Meek - - -	494
<i>Evidence of Early Man in North America.</i> By Edgar B. Howard - - -	495
<i>Menschen die Geschichte Machten.</i> Edited by P. R. Rohden - - -	495
<i>Historical Geography of Europe.</i> By Gordon East - - -	497
<i>Manuel d'Archéologie Préhistorique Celtique et Gallo-Romaine</i> Joseph Déchelette Volume VI. By Albert Grenier - - -	498
<i>Wealden Glass.</i> By S. E. Winbolt - - -	501
<i>Die Bandkeramische Ansiedlung bei Köln-Lindenthal.</i> By Werner Buttler and Waldemar Haberer - - -	502
<i>Dedolica.</i> By R. J. H. Jenkins - - -	504
<i>History of Carmarthenshire.</i> Edited by Sir John E. Lloyd. Volume I. - - -	506
<i>Gamle Gårdsanlegg I Rogaland.</i> By Jan Petersen - - -	508
<i>Les Peintures Rupestres schematiques de la Péninsule Iberique</i> , volume III. By L'Abbé Henri Breuil - - -	510
<i>Ancient Burial-Mounds of England.</i> By L. V. Grinsell - - -	510

EDITORIAL NOTICES

ANTIQUITY is published quarterly on the 1st of March, June, September, and December.

WRITERS wishing for reprints of their articles should apply to 24 Parkend Road, Gloucester.

THE ANNUAL SUBSCRIPTION (including postage) is ONE POUND sterling. It is payable in advance to ANTIQUITY, 24 Parkend Road, Gloucester, England.

SINGLE COPIES may be obtained direct or through booksellers for 5s. 6d. (post paid). Apply ANTIQUITY, 24 Parkend Road, Gloucester.

MSS (whether in the form of Articles or Notes) offered for publication should be sent to Mr O. G. S. CRAWFORD, Nursling, Southampton, England, and a stamped addressed envelope enclosed. All MSS must be typewritten. Payment is made for Articles only. The EDITORS are not responsible for the opinions expressed by contributors.

BOOKS for REVIEW should be addressed to the EDITOR, Nursling, Southampton.

ADVERTISEMENTS, and all communications relating to them, to be sent to 24 Parkend Road, Gloucester.

Binding Cases for Volume x (nos. 37-40) can be obtained from John Bellows Ltd., Gloucester, England, 4s. post free, or if the numbers are sent for binding the inclusive charge is 7s. 6d. Remittance must accompany the order.

SPECIAL OFFER

The following numbers of ANTIQUITY are offered for THREE SHILLINGS each NET, post paid. Remittances *must* accompany orders, which should be addressed to ANTIQUITY, 24 *Parkend Road, Gloucester*.

The titles of some of the important articles (nearly all illustrated) are given below. In ordering, the numbers should be stated.

- FORERUNNERS OF THE ROMANS, by D. Randall-MacIver. (6)
SCANDINAVIAN THING-STEADS, by F. Wildte. (7)
SWISS LAKE-DWELLINGS, by Paul Vouga. (8)
MAGIC ORIGIN OF PREHISTORIC ART, by Count Bégouen. (9)
STONEHENGE (coloured plan), by R. S. Newall. (9)
DYKES, by Cyril Fox. (10)
TOWN AND COUNTRY IN ROMAN BRITAIN, by R. G. Collingwood. (11)
ZIMBABWE, by G. Caton-Thompson. (12)
NEOLITHIC CAMPS, by E. Cecil Curwen. (13)
PREHISTORIC REMAINS OF THE MALTESE ISLANDS, by Sir T. Zammit. (13)
BUTSER HILL, by Stuart Piggott. (14)
THE FIRST MONASTERIES, by E. H. Sawyer. (15)
THE LION AND THE UNICORN, by C. G. E. Bunt. (16)
HILL-FORTS, by Christopher Hawkes. (17)
PRIMITIVE MAN IN CHINA, by G. Elliot Smith. (17)
NOAH'S FLOOD, by M. E. Malim. (18)
PALACE OF MINOS, by Percy Gardner. (19)
THE GODS OF PHOENICIA, by Ch. Virolleaud. (20)
THE SITE OF TROY, by Winifred Lamb. (21)
THE FIRST VERULAMIUM, by R. E. M. Wheeler. (22)
TWO GREEK FORTS IN SICILY, by R. G. Collingwood. (23)
DOGS, by Max Hilzheimer. (24)
ANCIENT CULTIVATIONS, by E. Cecil Curwen. (24)
BELGIC CITIES OF BRITAIN, by R. E. M. Wheeler. (25)
ANCIENT ITALIAN TOWN-HOUSE, by R. C. Carrington. (26)
ANCIENT MEXICO, by J. L. Mitchell. (27)
IONA, by O. G. S. Crawford. (28)

Ordnance Survey Maps

NEOLITHIC WESSEX

A map on the 'Quarter-Inch' scale, showing the distribution of long barrows, habitation sites, flint mines. With the folded edition is bound a descriptive schedule of sites and 15 pages of letterpress.

Price :—in cover, with letterpress, on paper 5s; on linen 5s 6d; dissected 6s 6d. Map only, paper flat 2s.

TRENT BASIN; SOUTH WALES

These maps are similar in style to the above, and the same price.

CELTIC EARTHWORKS OF SALISBURY PLAIN

This area will be covered by six sheets, of which the first, 'OLD SARUM', is now ready. This map, on the scale of 1:25,000, is based largely on Air Photographs and shows Celtic fields, linear earthworks and barrows. It is intended mainly for those interested in Field Archaeology.

Price :—in covers, on paper 2s 3d; on linen 3s; dissected 4s; on paper flat 1s 6d.

ROMAN BRITAIN

Scale :—1/M (1:1,000,000) showing Roman roads, towns, villages, potteries, mines, military sites (classified), milestones, villas and other large houses, etc. The physical basis shows relief by means of layer tints. With the folded edition is bound an index, chronological table, explanatory notes and bibliography.

Price :—in cover, with letterpress, on paper 4s; on linen 5s; dissected 6s 6d. Map only, paper flat 2s 6d. Also sold flat on tracing paper (Roman portion and woods only) price :—1s.

FIELD ARCHAEOLOGY.

Some notes for beginners. Price :—6d.

BRITAIN IN THE DARK AGES (South Sheet)

On the same scale and physical basis as 'Roman Britain', showing towns, villages and other sites of historical importance in the period (A.D. 410-871); also Anglo-Saxon cemeteries, crosses, memorial-stones, ditches, etc. Compiled from original sources. With the folded edition are small-scale distribution maps of place-names ending in -ing and of the A.-S. cemeteries (for comparison).

Price :—in cover with letterpress, on paper, 4s; on linen 5s; dissected 6s 6d. Map only, paper flat 2s 6d.

XVII CENTURY ENGLAND

On the same scale and physical basis as 'Roman Britain'; roads based on Ogilby's Survey (1675); towns and ports classified in order of importance. With the folded edition is bound a map of London (circa 1660), a foreword by Prof. G. M. Trevelyan, a brief outline of the Civil War by Dr. J. E. Morris and a chronological table compiled by Dr. Charles Singer and Sir John Squire.

Price :—in cover with letterpress, on paper 5s; on linen 6s; dissected 7s 6d. Map only, paper flat 2s 6d. Map of XVII Century London and environs, 1s.

OUTLINE MAPS OF GREAT BRITAIN (No. 1)

In two sheets (a) Scotland, and (b) England and Wales; each 29 × 21½ inches, showing coast lines and rivers only, in bold black lines on paper suitable for drawing or colouring; will reduce photographically to ½ without loss. Of great use to scientific workers and educationalists in preparing distribution maps for publication.

Price :—3d per sheet.

For full particulars apply (mentioning this announcement) to
The Director-General, Ordnance Survey Office, Southampton